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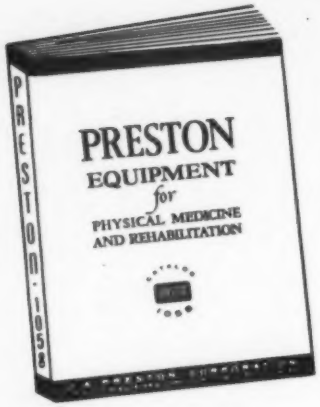

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THE JOURNAL OF THE ASSOCIATION FOR PHYSICAL AND MENTAL REHABILITATION

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TRAINING OF THE CORRECTIVE THERAPIST *

JOSEPH H. VAN SCHOICK**

Corrective Therapy is a relatively new profession, yet remedial exercise has been practiced for thousands of years. Inscriptions and crude pictures found in the Orient reveal that the Chinese practiced medical gymnastics at least 3000 years B.C. Pliny, the Roman naturalist and philosopher, recognized that the mind is stimulated by body movements. In the early 19th Century a system of medical gymnastics was inaugurated at the Royal Institute of Gymnastics in Sweden. During the latter part of that century the system was brought to this country. In that early period the pioneers in therapeutic exercise felt it was important to counteract confining physical postures and unhealthful work environment with exercises devised for health maintenance or for correction of early stages of deformity.

The World War I draft for military duty revealed that almost half of our young men were so far below par that they could not pass the Army examination. This led to greater emphasis on physical education in the schools. Laws were passed in many States requiring that supervised exercise be incorporated in school curricula, and a new name for physical education departments began to appear. In many colleges, YMCA's, secondary schools and other organizations, and in the literature, the term "Health Education," "Physical Health and Recreation," or similar titles were used to signify a broadening of purpose in the exercise program.

During the depression the development of physical education was retarded in some localities, but as World War II approached people became more health conscious. They were again shocked at the number of young people unfit for military duty, and as the draft severely drained our available work force increasing attention was given to the training and employment of the physically handicapped. Adapted physical education became increasingly important and significant.

During the early war years Dr. Howard Rusk introduced a revolutionary idea in military hospital treatment. He had noted the deconditioning results of prolonged bed rest which caused the loss of many days of critically needed military manpower. After hospitalization, patients would be returned to their units and have to be placed on light duty for a period to regain their strength for more active duty. He initiated a pilot program and study which clearly indicated the value of appropriate activity for many hospital patients along with definitive treatment. This was contrary to the long taught Weir-Mitchell theory of bed rest. Dr. Rusk's study proved that supervised physical and mental activity in the hospital setting was beneficial. Many patients were discharged earlier; re-hospitalization rate was lower; and the light duty details were sharply reduced. The saving in military manpower was so significant that the reconditioning program was authorized in all military hospitals.

Physical education made a dramatic contribution in this phase of the war effort. Millions of IBM cards were processed to find soldiers with physical education training and experience who might be fitted to carry on the physical reconditioning program in Army hospitals. Outstanding physical educators were called on to develop suitable exercise routines for bed patients with different types of disabilities and to teach in the intensive training centers established for physical reconditioning personnel. In these courses the former physical education teachers learned about hospital organization and ward procedure. They restudied physiology, kinesiology, physiology of exercise, phychology of the disabled and many other pertinent subjects. They studied and trained harder than they had ever done before because here was a new challenge. Here was a constructive side of warfare in sharp contrast to the destructive elements of training previously practiced on the target range, in the trenches, on obstacle courses, in chemical warfare classes, etc. I am proud to have been a part of that revolutionary hospital program in which so many of you pioneered. Because of your efforts physical education made a contribution in hospital treatment which has effected medical practice all over the world. Bed exercises, early ambulation, prosthetic training and similar corrective therapy procedures are prescribed today by most physicians as consistently as they insisted on absolute bed rest in pre-war years.

The development of the new profession of corrective therapy was a natural consequence of this military experience. When General Omar Bradley became the Administrator of Veterans Affairs and General Paul Hawley, Chief Medical Director, they determined that the valuable experience gained in the reconditioning program of the military should be preserved and further developed in veteran hospitals for the

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*Presented at the Second Tri-Organizational Conference, Atlantic City, N.J., July, 1958.

**Chief, Corrective Therapy, Veterans Administration, Washington, D.C.

benefit of veteran patients. Physical reconditioning became known as corrective therapy. The academic phase of educational reconditioning was called educational therapy and the pre-technical phase was called manual arts therapy. Physical therapy and occupational therapy were continued. All of these plus blind rehabilitation and audiology and speech correction were authorized as section components of the Physical Medicine and Rehabilitation Service.

Dr. John Eisele Davis, President of the Association for Physical and Mental Rehabilitation, was the first Chief, Corrective Therapy, in Central Office. His vision, persistent effort in the face of many trying circumstances, and professional leadership have been primarily responsible for the growing acceptance of this new profession by medical leaders. From his own experience in VA hospitals he had a keen perception of the areas of treatment in which the therapeutic exercise, motivational impact and resocialization techniques of corrective therapy could make distinctive contributions in patient treatment. He had a physical educator's acumen in planning appropriate training opportunities for corrective therapists. He sensed the need for a professional association to afford stimulation, interchange of ideas and development of professional standards. The result is a new specialization in the field of physical education—a new medical tool in the armamentarium of the physiatrist—an enthusiastic dedicated group of therapists who have gained equal status with other adjunctive therapists in physical medicine and rehabilitation.

When corrective therapy started in the VA in 1946 personnel were selected from the 20,000 physical reconditioning instructors who had been previously screened for physical reconditioning in the military. The approximately 400 personnel employed in our VA hospitals and regional office clinics were among the best in physical education. Today, with added training under the direction of the physiatrist, they are a professional group to be proud of, and number about 500.

The demand for corrective therapists increased along with the expansion of rehabilitation programs all over the country. New personnel from the field of physical education had to be recruited. It was important that qualification standards be established to insure high levels of professional competency. Schools of physical education now have a challenge in student training which did not exist before World War II. They need to prepare physical education students not only as teachers for schools and colleges, but as therapists for hospitals and rehabilitation centers. Added courses and emphasis are needed to prepare the present generation of college students to enter this new profession and share the responsibilities of patient treatment along with the pioneers in corrective therapy who had physical education, plus Army reconditioning experience, plus intensive in-service training in the Physical Medicine and Rehabilitation Services of our hospitals.

In discussing the qualification standards for corrective therapists, I realize that this profession now extends far beyond the VA program. But since I am most familiar with VA requirements, I will confine myself to our standards for employment. Corrective therapy applicants for the basic grade of GS-5, salary $4,040, must have successfully completed the requirements for graduation from a school of physical education or an accredited college, university, or teacher-training institution with a major in physical education, or study which included or was supplemented by at least 24 semester hours toward such a major. At least 20 of the 24 semester hours must be in such courses as corrective and remedial exercise, physiology of exercise, techniques of sports and games, hygiene, first aid, methods or principles of teaching physical education, physiology, kinesiology, human anatomy, psychology, or pathology. Four semester hours may be in such basic related courses as bacteriology, physics, chemistry or biology. In addition, this education must have included or been supplemented by at least one course in clinical practice in therapeutic exercise in which patients participate upon prescription of a doctor of medicine.

When the applicant meets all requirements except clinical training he may substitute, for GS-5, 6 and 7 grades, experience as an athletic technician or sports specialist in a program of recreational physical education in a hospital or rehabilitation center, provided that a major portion of time was spent in supervision of patient participation in a comprehensive program of physical education activities.

If the applicant has engaged in postgraduate study appropriate to corrective therapy in an accredited college or university, which included or was preceded by clinical practice he will meet the requirements for the GS-6 position, base salary $4,490. Successful completion of all the requirements for the Master's degree in a field approprate to corrective therapy, including or preceded by clinical practice will be accepted as meeting the full requirements for the Grade GS-7, base salary $4,980.

The significant factor in these standards is the requirement of clinical training. Schools of physical education can provide this clinical training by affiliation with a VA hospital or with any other appropriate medical setting outside the VA where proper clinical experience under medical supervision may be secured.

Schools are beginning to realize that a new profession for physical education graduates has arrived and

that it is of mutual advantage to school and students to make provision in the curriculum for the required training. The VA has 33 affiliations between schools and hospitals for clinical training in corrective therapy. Many more are working out the necessary arrangements and will seek approval later.

The purpose of clinical training is to provide students a realistic opportunity to apply the principles of adapted physical education as studied in the schools in a medical setting under the physician's supervision. The hospital plans a training program of orientation in hospital procedure, lectures on phases of corrective therapy not included in the school program and clinical practice. Lectures by the corrective therapy staff and medical authorities include such subjects as patient-therapist relationships, functional evaluation and testing, familiarization with braces and appliances, neurological aspects of cord injury, orientation to neurological conditions, amputations and surgical procedures, medical conditions and rehabilitation, self-help devices and evaluation of hand disabilities, types of neuropsychiatric patients, mat exercise routines, wheelchair exercises and activities, methods of teaching ambulation activities, paraplegia and quadriplegia exercise and activity routines, psychology of the disabled, motivational techniques, hospital organization, therapy elements and their functions in the rehabilitation process, and many others. When the school curriculum provides courses which cover these or related subjects, they would naturally not need to be included in the clinical phase of training at the hospital. Since school curricula do differ greatly, the corrective therapy clinical training program is worked out in collaboration with the school prior to application to Central Office for approval of the affiliation. One of the important aspects of corrective therapy training which comes best in the clinical setting is understanding of medical philosophy and respect for physician leadership.

Corrective therapy has an important place in the educational system as well as in hospitals and rehabilitation centers. Children and college students with physical and emotional problems need the kind of specialized physical activity and sympathetic teacher relationship which the physical education instructor who has received clinical training is prepared to give. The motivational impact of teachers who have an appreciation of the psychological effect of disability on youth is an important factor in their adjustment to life and in the development of their capacity to overcome or compensate for such disabilities. There are thousands of examples of well-known athletes and outstanding business and professional leaders who pay tribute to the teachers who gave them the confidence and inspiration to make good in spite of handicaps.

Vocational guidance is a broad process. It requires specially trained counselors at times, and in many cases the combined efforts of psychologists, teachers, the church and home fail to match the inner urges and capacities of youth with appropriate opportunities for careers. The influence of teachers in this respect cannot be overrated. The clinical training aspect of the school physical education curriculum is a sound vocational guidance procedure. It helps the student decide whether he wants to work in the medical setting or apply the valuable clinical experience acquired in other fields.

When the hospitals establish affiliations with schools for clinical training they share their facilities and become partners with the schools in training as well as in practical vocational guidance. Students are helped to find their niche in life, and the rehabilitation impact of clinically trained workers, whether the students become corrective therapists or teachers, helps to develop the potentials of our handicapped citizenry who might not otherwise make their maximum contribution to life. Corrective therapy as a profession, and clinical training as an educational process, are factors of increasing social significance.

CERTIFICATION BOARD SCHEDULES EXAMINATION

Louis F. Mantovano, Coordinator of the examining section, has announced plans to hold an examination for candidates who wish to be certified by the American Board for Certification of Corrective Therapists. The examination will be held July 8, 1959 at the Deauville Hotel, Miami Beach, Fla. during the Tri-Organizational Conference week. Candidates interested in taking the examination at this time should contact Mr. Mantovano at 37 Clinton Ave., Rockville Centre, N. Y.

In addition to the scheduled examination, there is a possibility that arrangements may be made for local examinations through the association's chapters provided a sufficient number of candidates are available. It is believed that such an examination would make a useful project for a chapter and at the same time provide a service to local candidates, saving them the time and expense of traveling long distances to take the examination.

ATTITUDES IN THERAPY

JOHN E. DAVIS, JR., Ph. D.

During the past thirty years, 9,426 articles and books, plus or minus 2.712, have been published in English on the topic of attitude; a large proportion of them dealing with attitudes toward people.[1] It is apparent that attitudes have been a matter of concern to many aside from ourselves.

For our purposes, we will define attitude as a position or posture assumed intentionally or otherwise to serve a purpose and we shall define therapy as any effort we may make to motivate or influence a mentally ill person. While these definitions leave room for such things as unintentional therapy and/or unconscious attitudes, they emphasize the purposive, intentful nature of both attitude and therapy — in short, they are things we can do something about.

Before we concern ourselves with present-day attitudes in therapy, it may be well to review some of the attitudes which have existed in the past. Little is known of primitive man's attitude toward mental illness but it is unlikely that he made any clear distinction between fate, belief, or disease; that is, mental illness was not identified as such among primitive people. Without a conspicuous physical disorder, such as a pain or swelling, there was no cause or focus to treat. We may consider this earliest historical attitude as one of unobserving or denial.

Through the early development of mankind, there must have been an increasing recognition of the mentally ill person as "being different" and, during this era being different was regarded as being supernatural. The mentally ill person was thought of as being infested by godly, animal, or devilish spirits. His strange and mysterious behavior was explained as being beyond his or anyone else's control unless supernatural help was called upon. Here we have acknowledgement of mental disturbance but an attitude of helplessness.

The ancient Hebrews show a certain familiarity with psychological disorders; for instance, in the Biblical story of David's escape from captivity by feigning madness, and it is written in Leviticus, "A man also a woman who has a familiar spirit, or that is a wizard shall surely be put to death; they shall stone them with stones; their blood shall be upon them." Such a disposal of the mentally ill has shown a remarkable vitality, cropping up repeatedly through the centuries, almost to the present day and bears witness, I am sorry to say, to attitudes of fear and hostility toward the mentally ill.

It fell to the Greeks with their inquisitiveness and rational genius to make the first attempts to free mental illness from mysticism and superstition and to propose humane and rational ways of treating the mentally afflicted.

After Greece came the Roman era with a continuation of the Grecian ideas concerning cause and treatment of the mentally disturbed. With the fall of the Roman Empire, there was a decline in intellectual endeavor. In place of scientific observation and objective study of man, personal salvation and the hereafter absorbed all of man's attention—the so called Middle Ages. Mysticism, superstition, belief in witchcraft, and demonology substituted for factual knowledge. The Church authorities, after some period of hesitation and uncertainty, decreed that all of the mentally ill were possessed by demons. At first, the attitude toward them was considerate and the intervention of Saints was called upon, but as the number of mentally ill grew, passions were aroused and soon instruments of torture—burning at the stake—became the recognized tools of treatment.

The Renaissance brought a freedom from theology; man slowly became again an object of investigation and the Eighteenth Century witnessed two major developments: (1) the reformation of hospitals for the mentally ill and, (2) the emphasis on empirical observation and their systemization.

A new era in the conception of mental illness was initiated by Sigmund Freud. Psychoanalysis, originally a term denoting a method of treatment, later came to also mean a theory of personality upon which treatment is based. Freud's formulation of the unconscious, psychological defenses, and stages of psychological development are well known to all of us and his concept of transference is particularly relevant to our thinking about attitudes in therapy, since the attitudes of the patient toward us are often important determinants of our attitudes toward him.

Most important is the fact that implied in all of Freud's work are: (1) Mental illness is a result of faulty psychological rather than physiological development; and (2) these processes may be reversed by a special type of interpersonal relationship in which

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**Chief, Clinical Psychology, V. A. Hospital, Lexington, Ky.

[1] T. M. Newcomb, The Prediction of Interpersonal Attraction, *Amer. Physiologist*, 2:575-586, 1956.

certain procedures or techniques are followed. Freud's thinking implied that mental illness was not incurable but was something which could be treated. Further, it had the unique feature of defining that this treatment consists of treating man with man, of setting up a corrective type of interpersonal relationship to revise previous pathological relationships. This was in sharp contrast to others in Freud's time, who were taking the investigation, classification, and treatment of syphilis as their model in approaching the problem of mental illness.

This brings us to the contemporary scene and we may do well to stop and review where we have been. From primitive man's attitude of unobservation and denial, there was a progression during early Biblical times to an understanding of mental illness as being somehow different, but only the supernatural was considered as capable of producing or curing it. The Greeks and early Romans had an enlightened viewpoint, contributing the idea of physical causality and an attitude of sympathy resulting in more humane treatment. An era of regression followed, in which the devil, in one form or another, was the cause; and torture, as a means of exhortation, was the treatment. The Renaissance brought forth a more objective appraisal of man's problems, including that of mental illness. The Eighteenth Century saw the rise of the mental hospital movement and classification of mental disorders. The study of abnormal behavior slipped away from both internal medicine and philosophy, becoming a field in its own right. The last step was Freud's original discoveries and their implications of treatment with words and attitudes.

I would like to discuss a few of the prevalent theories with respect to their viewpoints on therapist attitudes, then try to relate them directly to your work as PM&R therapists.

The outstanding non-psychoanalytic therapy goes under the name of non-directive therapy and is associated with the name of the founder, Carl Rogers. I would like to quote from his book on client centered therapy[2]: "In any psychotherapy, the therapist himself is a highly important part of the human equation. What he does, the attitude he holds, his basic concept of his role, all influence therapy to a marked degree."

In non-directive therapy, we find a clear cut statement of "correct" attitudes for the therapist. He should be respectful and non-infringing; or we may say warm, respectful, and non-directive. It is important to note here that the non-directive school has, for the most part, treated patients whom we would classify as traumatic neurosis, reactive depression or situational maladjustment and who appear voluntarily for psychological help.

Another contemporary theory is the neo-Freudian viewpoint characterized by Karen Horney. In respect to attitudes in psychotherapy, Horney rejects the attitudes of tolerance and objectivity, feeling they are neither desirable nor possible in a theraputic relationship. She believes in actively directing the treatment and states, "As soon as I believe the patient is running into a blind alley, I do not hesitate to interfere most actively and suggest another way." In another place, she states, "Instead of tolerance or pseudo tolerance, there should be constructive friendliness."[3] This attitude is in almost direct opposition to that of Rogers previously referred to. Again of importance is the fact that Horney, for the most part, was engaged, when formulating these principles, in the treatment of rather severe psychoneurotics.

More appropos to our interest are the theories and attitudes in relation to the psychotic patient. We will consider the approach of three workers in this field.

Frieda Fromm-Reichman has had an extensive experience over many years in the treatment of hospitalized psychotics. She was deeply impressed with the schizophrenic's sensitivity in interpersonal relationships and his insatiable craving for the affection and acceptance which he did not receive as a child.[4] To deal with this sensitivity and distrust, Fromm-Reichman erected love and patience as the cardinal attitudes in therapy. She strove to be as permissive as possible, taking extreme precautions to prevent hostile reactions on the part of the patient. For the most part, she treated the typical hospital schizophrenic.

John Rosen[5] has developed a therapeutic method, "direct analysis," so named because of his uninhibited interpretation of the patient's unconscious productions and symptomatic acts. He joins the patient on the level of his psychosis, sharing with him his psychotic reality which is peopled with magical infantile figures. The therapist endeavors to personify these images as they are revealed in the patient's hallucinations and convert them from terrifying, threatening figures into benevalent, protecting ones. Rosen does not confine himself merely to interpretation; he *acts* the good parent as well. His patients were, for the most part, agitated schizophrenics.

Cont'd on P. 199

[2]Carl Rogers, *Client Centered Therapy*, Cambridge, Mass.: Houghton Mifflin Co., Riverside Press, 1951.

[3]Karen Horney, *New Ways in Psychoanalysis*, New York: W. M. Norton & Co., 1939.

[4]Frieda Fromm-Reichman, *Some Aspects of Psychoanalytic Therapy in Psychotherapy with Schizophrenics*, a (symposium), E. B. Rody and F. C. Redlich, New York: Int. Univ. Press, 1952.

[5]J. N. Rosen, The Treatment of Schizophrenic Psychosis by Direct Analytic Therapy, *Psychiat. Quarterly*, 21:3: 21:117, 1947.

AN ADJUSTABLE LONG LEG BRACE FOR USE IN REHABILITATION CLINICS

LESTER W. DANIELS, M. ED.*

Introduction

Patients with varying degrees of disability affecting the lower extremities are frequently prescribed by physicians for weight-bearing activities in corrective therapy. Types and dosage of activity ranging from mere physiological stabilization (supported standing) to endurance ambulation in parallel bars or with crutches may be indicated. Many of these patients have not been on their feet for months and have complicating conditions which make it difficult to carry out this prescription. Some complications often encountered by the therapists are fear and anxiety, joint range limitations, muscle weakness and spasticity.

With all these factors and the patient's anxiety about whether he will ever walk again, it becomes imperative that we make the first attempts at standing and weight bearing activities successful. We obviously cannot have long leg braces made for all patients who are unable to get into the standing position and walk during the early convalescent period. Many of these patients soon get return of muscle function and/or improvement in joint ranges of motion and braces are no longer needed. Other patients are in transitory stages insofar as disease processes are concerned, and exacerbations of conditions may make it impossible for them to stand again for many months, if ever. Physical medicine clinic storerooms and shelves are loaded with discarded braces resulting from similar situations.

The writer felt that a good solution to this problem would be to make a pair of adjustable long-leg braces which could be kept in the clinic and used by all patients where indicated. The braces were conceived by the writer, and in cooperation with Mr. Clifton R. Mahone of the Mahone Orthopedic Brace Company of Newport News, Virginia, were designed and constructed. One brace may be made which will fit either side, but it is advisable to have two for cases of bilateral involvement of the lower extremities. The brace is comprised of many standard brace parts (with the possible exception of the cuff inserts). However, the combination of these parts has proved very satisfactory for the purpose for which it was designed.

Advantages of Early Bracing

This brace, being available to the therapist treating early convalescent patients who have weakness or disability of the lower extremity or extremities, makes it possible for the patient to stand (or be stood) on his feet in a good weight-bearing position for increasing periods of time, as well as to improve standing balance and ambulation. There is also the tremendous psychological boost to the patient who has worried about never standing or walking again. There is no question of the physiological benefits of early ambulation and/or weight-bearing. Some of these are improved muscle tone and circulation of legs and trunk, prevention of osteoporosis of the bones, and improved standing balance.

There are many and varied devices now being used to stand patients. Some are: the tilt tables, straps placed across the parallel bars, and knee-cage braces. With all of these, the patient cannot walk, move, or change the position of his feet. Secondly, in all these strap-supported situations, the legs do not get firm, well aligned support over the entire leg length and no lateral support. With the adjustable braces, the patient

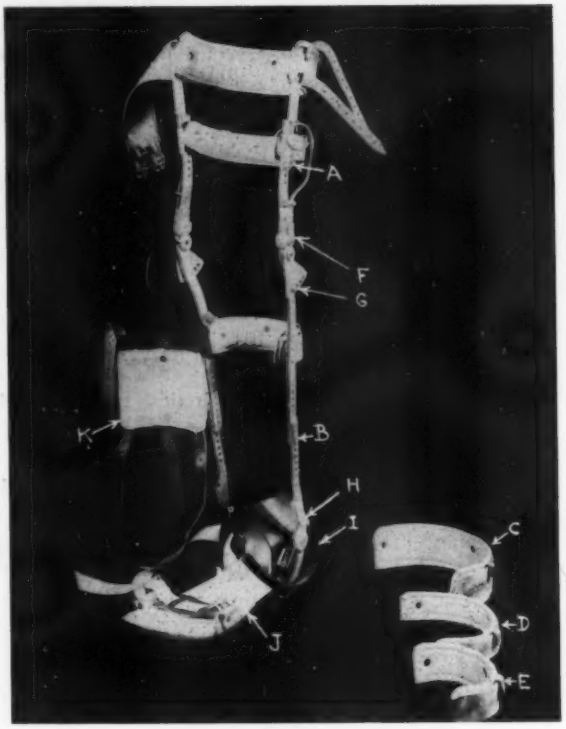

Fig. 1
The Adjustable Long Leg Brace

*Chief, Corrective Therapy, Veterans Administration Hospital, Kecoughtan, Virginia.

feels that he is doing the standing and not being supported by bars or table. In many situations, an improvised knee-lock brace has been used. This has proved unsatisfactory because so many patients have drop-foot conditions which make it difficult to walk even though the knees are locked..

Features of the Adjustable Long Leg Brace

The brace (Fig. 1) is designed so that it may be used for many different kinds of patients, from the standpoint of physical stature as well as disability. The different leg lengths may be fitted by adjusting the vertical uprights, both above and below the knee. This is done by moving set-screws (A & B). The variations in girth of the leg at the calf, middle and upper thigh levels are adjusted by adding any of three sizes of clamp-on inserts, (C, D & E). The knee joint has a drop-ring lock (F), which may be set at varying angles of extension by moving a set-screw (G) for situations in which there are knee-joint range limitations. The ankle joint is a Klenzak type with adjustable spring tension, (H). This is to compensate for drop-foot problems. Ankle problems, such as inversion and eversion are corrected by "T" straps, (I), attached to both uprights. The foot paddle is large enough to accommodate a large foot and has a foot-strap for smaller feet, (J). The foot-paddle is metal with a plastic covered soft rubber lining; is curved and has a heel for walking. This eliminates shoe fitting problems. The brace has a conventional type knee pad, (K), with a strap which can be arranged to correct the knee position either medially or laterally.

Procedures

Some typical patients who have used the brace(s) with good results are: (A) J.R.—A 67 year old male patient with left hemiplegia complicated by generalized weakness. This patient (Fig. 2) used the brace for six weeks. After this period, he developed sufficient strength of quadriceps and hamstrings so that only a drop foot brace was needed.

(B) A.R.—63 year old right and left hemiplegic disabled from multiple strokes. After two weeks this patient died, as result of a subsequent stroke.

(C) S.B.—30 year old male patient with polio quadriplegia. Patient used two braces for supported standing for about four weeks. After this period permanent long leg braces were received.

(D) S.W.—35 year old male patient with multiple sclerosis. Patient has used adjustable braces intermittently over one year of treatment, mostly during periods of remission. It is not likely that he will ever walk independently.

(E) F.H.—26 year old male patient with multiple sclerosis. Patient has continued to regress insofar as physical capacity is concerned, throughout the past year. He was initially able to ambulate up to 100 yards with no bracing. With increasing generalized spasticity he needed bracing for the lowers. Patient used the adjustable braces bilaterally for about one month. Presently he is not able to ambulate even with braces due to increased weakness and spasticity of the upper extremities.

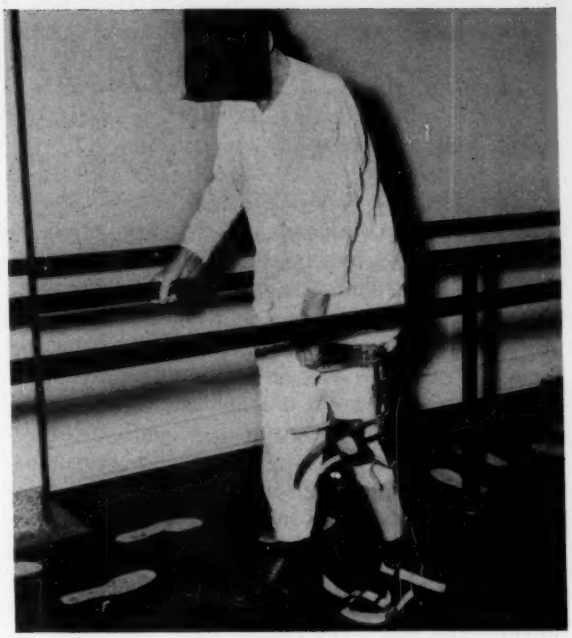

Fig. 2
Adjustable Brace Used by Left Hemiplegic

(F) G.G.—66 year old male, right hemiplegic with right hip fracture (healed) and some contracture of both knees. Patient has used the brace to ambulate in bars and improved in gait and ambulation endurance, as well as improved ranges by locking knee for increasing periods of time.

In all of these cases the adjustable braces served adequately the purposes for which they were designed. The braces can be adjusted and applied by a therapist in about five minutes.

Summary

An adjustable long leg brace which is utilized in the corrective therapy clinic is described. This brace has been used with good results for about a year. Chief advantages of the brace are: (1) Gives the physician an indication as to the practicability of ordering special braces for each patient; (2) Gives adequate standing support in the early phases of physical rehabilitation when immediate availability is important; (3) Provides an inexpensive method which obviates the need for purchasing braces for temporary use; (4) gives good results for both bed and ambulant patients who have contractured knees. The brace is adjusted to put increasing tension on the joint.

PHYSICAL ACTIVITIES IN THERAPY

WILLIAM T. APPELL, Ph. D.**

WILSON L. HUNT, Ph. D.***

This paper will describe, in limited fashion, one form of physical activity for use in therapy with neuropsychiatric patients—the Relaxation and Motivation Technique. We shall attempt to answer some basic questions regarding the usefulness of this technique, as well as exploring some of the factors involved.

From a historical point of view, this treatment method evolved from Roland's personal experiences in trying to work with hospitalized schizophrenic patients and developed into a technique of treatment. It is a program based on empirical findings and theoretical constructions[1,2]; having had evaluation both as a treatment program,[6] and as an individual therapy technique[4]. It is not completely new, inasmuch as it involves the re-organization of many standard techniques, but it does appear to have significant differences from many programs described in psychiatric literature[5,6,7,8,9].

The present program has existed within the Continued Treatment Service of the hospital. The total patient population of this program was forty patients of various schizophrenic diagnostic categories, all of whom were long term regressed cases. The goals of this therapy are first, to simplify nursing care for the individual patient; second, make the patient accessible for other forms of therapy and, third, to return the patient to the community.

Since our time for collecting data was limited to five months, these experimentors studied this program through extensive observations of activities, both of patients and personnel, through clinical interviews with patients and by using a simple rating scale for evaluating patients' progress. However, it must be realized that the Relaxation and Motivation Technique is designed to treat the patient over an eighteen month period, and our evaluation occurred at the end of twelve months of treatment. Also, new patients had entered the program after its starting date. In brief, of the forty patients studied, twenty-six received twelve months of therapy; three patients received ten, nine and eight months, respectively; nine patients received six months; and two patients received five and four months of treatment each.

For the purpose of this report, patients' progress is considered on a twelve month basis, using as our base line the fact that these were long-term, regressed cases, with whom other treatment procedures had met with little success.

A simple rating scale was used, having four categories ranging from 0 to 3, and patient's progress was graded within this scale. Category number 0 stood for failure; 1 was for patients showing some clinical improvement; 2 indicated that the patient was now able to engage in other forms of treatment, and 3 indicated that the patient had been, or was being considered for, discharge from the hospital. Personnel other than the research team graded these patients.

Our evaluation found no category 0 patients, seven patients in category 1, twenty-three patients in category 2 and ten patients in category 3. Therefore, we found a zero percent of patient progress failures, according to our criteria, in the Relaxation and Motivation unit. 17 percent of the patients have shown some clinical improvement; 57 percent of these patients are now able to engage in other forms of treatment, while 25 percent have been, or are being, considered for Trial Visit.

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**Clinical Psychology Service, V.A.H. Chillicothe, Ohio.

***Clinical Psychology Service, V.A.H. Canandaigua, New York.

[1]O'on K. Timm, Lloyd C. Ellege, Paul E. Roland and Roy H. Taylor, Manual for Setting Up and Operating a Clinic for Persuasion and Relaxation Therapy, V.A.H. Danville, Ill. (Unpublished).

[2]Paul E. Roland, Emotional Tension as an Autistic Barrier Between Patient and Environment (Unpublished).

[3]C. A. Cuadra, An Experimental Evaluation of the Relaxation Persuasion Technique for the Treatment of Chronic Schizophrenia (Unpublished).

[4]Staff Members of V.A.H., Topeka, Kans., An Evaluation of a New Method in the Treatment and Rehabilitation of Chronic Catatonic Patients (Unpublished).

[5]Stanton P. Fjeld, Rubel J. Lucero and A. Rechtschaffen, Cross Validation and Follow-Up of a State Hospital Total Push Program for Regressed Schizophrenics, *Journal of Clinical Psychology*, 7:250-254, 1951.

[6]M. D. Gross, Therapy in a State Hospital Regressed Ward, *Journal of Nervous and Mental Disease*, 120:324-329, 1954.

[7]W. E. McCullough, Report of an Integrated Therapeutic Program: a Three Year Ward Experiment, *The Psychiatric Quarterly*, 29:280-309, 1955.

[8]A. Myerson, Theory and Principles of the 'Total Push' Method in the Treatment of Chronic Schizophrenia, *American Journal of Psychiatry*, 95:1197-1204, 1939.

[9]K. J. Tillatson, The Practice of the Total Push Method in the Treatment of Chronic Schizophrenia, *American Journal of Psychiatry*, 95:1205-1213, 1939.

We do not know what results this board would have obtained had they examined the same number of chronic patients from other wards of the hospital. However, the patients on this program represent only three percent of the total population of the Continued Treatment Service. It must be considered that these patients were, by implication, certainly not the best hospital patients. Yet during the period from 1 February 1955 to 1 February 1956, which is the period that this program functioned at the hospital, six percent of the patients who went on Leave of Absence from the Continued Treatment Service were patients from this activity program. Proportionately, one would expect only three percent of the patients to be on Leave of Absence and three percent of the patients on Trial Visit from the Relaxation and Motivation program, since the patients in this program represent only three percent of the total population of the Continued Treatment Service. Apparently, the probability of a patient's going on Trial Visit or Leave of Absence at least doubled when the patient left another part of the Continued Treatment Service to enter this program.

It would be better to determine expectancy or probability figures for each patient dependent upon his previous psychological condition and the particular building in the hospital from which he came to this program. However, we have begun to evaluate a program already in progress, wherein no experimental controls were originally in existence, nor were there any precise statements of the patient's original condition.

From our limited data relating to the categories of patients progress, it appears that the goals of this form of therapy are met. Again, considering that the objective of the program is along the lines of practical rehabilitation, rather than the complete removal of basic psychopathology, it would appear that this form of treatment offers much to certain hospitalized neuropsychiatric patients.

The limited research time only allowed the exploration of certain factors that may be involved in the success of this program. We choose the items of "relaxation," the leader, communication, language and flexibility to explore, hoping our findings would suggest possible research areas to other investigators.

What "relaxation" is, how it is done, and some suggested rationale for its results, as well as clinical studies, are already described in the literature[10,1,2,3]. We have been interested in "relaxation" with a view to learning more about it from a variety of levels. Therefore, with only very limited research observations to guide us, we will offer general statements that only future research can prove or disprove.

It has been wondered by some if "relaxation" may produce changes within the physiology of the individual. To date, we have made no attempt to explore this area. We have noticed, however, that the process of "relaxation" will often produce sleep or a sleep-like state; how and why this state may affect the patient being treated is unknown to us.

We do know that "relaxation" is liked and desired by the patient and does seem to help the patient in terms of his accessibility to personnel and in terms of improvement in his immediate physical appearance. These two observations suggest that something does occur during "relaxation" that is probably on both a physiological and psychological level.

It is possible that this technique may well fit in with the patient's passive-receptive orientation, or that it appears as "real treatment" to the patient, again, that someone is directly interested in him, and possibly allaying his fears of both the therapist and the hospital. In brief, the relaxation technique seems to be of benefit in the establishment of a close working rapport between the therapist and the patient and does seem to benefit the patient.

"Relaxation," considered from the viewpoint of its usefulness to the therapist, raises the question that this technique may be of more importance to the therapist than the patient. By this we might speculate that a procedure of this order may aid the therapist in becoming more interested in the individual patient; or, it might provide some means of physically releasing the therapist's anxiety concerning the patient.

In summation, we cannot now arrive at any definite conclusion regarding "relaxation," other than it seems to contribute to the results of the total program.

Since we observed that the personnel of this program had an excellent group relationship, we attempted to partially isolate the role of the leader, searching for clues to the high morale of the group.

We found that this program had two leaders, both of whom have been partly responsible for the formation of this group. Each of these leaders, whom we shall call X and Y, has had a fairly separate and distinct role. Our data points out that leader X instructs the group in techniques of therapy, takes charge of the over-all planning concerning the group's duties and orientation, and keeps the personnel interested in their treatment of the patients. His relationship to the group is that of a friendly nature; he is confident of their treatment abilities, and there seems to be a warm relationship between him and the ther-

[10]Paul E. Roland, An Exploratory Training Technique for the Re-Education of Catatonics, *American Journal of Psychiatry*, 105:353-356, 1948.

apists. While leader X does not maintain too much direct contact with the patient group, he is always aware of the progress of all of the patients in treatment, at least in a general sense.

The role of leader Y is to keep the group working, being always ready to point out weaknesses in its performance and concerning himself with administrative duties. He is usually quite directive in his attitude toward the therapists, not being as confident in their abilities as is leader X and, in return for this, receives some hostility from the personnel group; which is not severe in nature. Leader Y has more direct contact with the patients than leader X but does not seem to know the over-all situation, in respect to patients, as well as leader X.

We cannot say, at this time, if it is necessary or not for the formation and success of an activity program to have two leaders within the group. We are rather inclined to believe so, but this is a question that only future research can answer.

Our observations of the roles of the leaders led us to explore the area of communication within this program. We found two systems in operation, the formal method and the informal. In both systems, similar material is passed on, as case history material, patients' progress, and administrative information.

It would appear that the difference between the two systems lies not in the material but in the fact that by utilizing the informal method, individual therapists can communicate with other therapists or with either leader quickly and easily. The most used system is the informal one, which also appears to cause the least distortion of subject matter.

While it is probably true that informal systems of communication in a group always exist, it appears that this program has encouraged and fostered its development, seemingly to the advantage of both personnel and patients. Not only do patients' actions and progress tend to be more easily understood to the personnel, but we also observed that negative intra-staff feeling tends to diminish. Future research might endeavor to discover how such development of communication can be encouraged.

Naturally, one of the major components involved in communication is that of language; we became interested in language as a result of our observations concerning the term "regression" within case histories. It was found that the term tends to be used as a colloquialism by the hospital staff-at-large. In our sample of ten chronic patients now being treated within this activity program, we found that seven of these patients out of the ten have been called "regressed," or have had the term applied to them as some point during their total hospital course. Only four out of these ten patients have been called regressed by staff physicians; the term has been mainly used for these patients by Physical Medicine and Rehabilitation personnel. Even here, the term has various meanings, depending upon which of the personnel used the term. We noted that it is possible for a patient being seen by a therapist at one o'clock to be considered "regressed" and to be seen by another therapist at two o'clock and to be considered "improved," all in the same day. It has also been noted, though not explained, that the use of the term "regression" for our patients seems to center about a particular period, which is roughly that of 1950.

In contrast to the use of terms with varying connotation by different sections of this hospital, we observed the more careful and meaningful use of terms by personnel within the Relaxation and Motivation program. It seemed possible for the personnel to arrive at common meanings for various words that enable themselves to be understood by other members of the group. We cannot, at this time, explain how meaningful language has evolved here, but might consider it as a possible development of a good working situation and a development that should benefit the patient.

The last factor that we studied in this activity therapy program was that of "flexibility." We found that the Roland program was extremely flexible in terms of its organization and its treatment methods. This is well illustrated in its use of treatment aims for patients. The aims used were designed to meet the needs of a particular patient, not a group of patients. Additionally, the treatment aims were continually changed to meet even minimum patient changes. It would appear that this program is so designed as to avoid static treatment. This flexibility may be an important aspect of its success with mute, negativistic patients who do not readily cooperate in the usual group activity program.

Conclusions

1. From our limited data and in terms of our criterion, the Relaxation and Motivation Program appears to be of benefit to hospitalized neurospychiatric patients.
2. Only certain factors, as relaxation, leadership, communication, language and flexibility, have been briefly explored, although, certainly, other unknown factors must contribute to this program.
3. Future research problems in this area are suggested.

Best Wishes for a Merry Christmas and a Happy New Year

SOME PHYSIOLOGICAL EFFECTS OF PROLONGED PHYSICAL TRAINING IN A CHAMPION ATHLETE*

PHILIP J. RASCH, Ph. D.

MERLIN BRUBAKER

One of the most serious difficulties confronting students of sports medicine is the lack of longitudinal studies. Most of the reports in the literature present physiological data recorded on athletes on a single occasion and do not include the necessary follow-up data for evaluating changes resulting from prolonged physical training. In 1948 and 1949, Cureton and his associates[1] conducted extensive examinations on certain athletes who had participated in the United States national championship and Olympic games. Among their subjects was Robert Richards, the famous pole vaulter. This information was published in detail and thus made available to other researchers.

During the intervening nine years following the study by Cureton, Richards continued hard physical training for pole vaulting including considerable time devoted to the practice of progressive resistance exercises. In 1957, just before becoming a professional, Richards permitted the writers of the following report to record certain data including anthroprometric meausrements, blood pressure and electrocardiogram. It is the purpose of this paper to present a comparative study of the data obtained in 1948-49 and in 1957 to ascertain the extent of physiological changes during that time and to evaluate the effects of prolonged physical training on certain anatomical and physiological functions.

Procedure and Results

At the time of examination the height and weight of the subject were recorded. From these physical data the body surface area and reciprocal ponderal index

$$\frac{\text{height in inches}}{\sqrt[3]{\text{weight in pounds}}}$$

were computed. The anthropometric measurements recorded in 1948-49 and in 1957 are presented in Table 1. Blood pressure readings and pulse rate were obtained by the standard auscultatory method, with the subject supine. These data are presented in Table 2.

Factor	1948	1957	Change
Age	22 yrs.	31 yrs.	+9 yrs.
Height	69.75 in.	70.0 in.	+0.25 in.
Weight	161.00 lbs	168.0 lbs.	+7 lbs.
Body surface area	1.88 M.	1.92 M.	+0.04 M.
Reciprocal ponderal index	12.82	12.69	—0.13

TABLE 1

ANTHROPOMETRIC MEASUREMENTS

Systolic blood pressure	122 mm. Hg.
Diastolic blood pressure	76 mm. Hg.
Pulse pressure	46 mm. Hg.
Pulse rate	52

TABLE 2

BLOOD PRESSURE AND PULSE RATE, 1957

With the subject still supine, a standard 12-lead electrocardiogram was recorded by means of a Burdick type EK-2 direct writing electrocardiograph. A portion of the electrocardiogram is illustrated in Fig. 1, and certain measurements therefrom are presented in Table 3. Inasmuch as the precordial leads were not recorded by the same technique in the studies of 1948-49 and 1957, only the data from the three standard leads were tabulated for comparison.

Discussion

The minimal change in measurements was perhaps the most significant finding revealed by comparison of the two sets of anthropometric data. Moreover, the subject's general appearance showed no apparent physical deterioration. Both his measurements and general appearance add support to the opinion held by some authorities that regular physical activity up to the physiologic optimum inhibits aging and deterioration of the body.[2]

Physical examination of the subject in 1957 revealed his blood pressure to be 122 mm. of mercury systolic and 76, diastolic, which, according to the standards of Master, Dublin and Marks[3] is normal for a person of his age. His low pulse rate of 52 is not unusual for athletes in good physical condition.

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*Report No. R 2-58, The Research Center, Los Angeles County Osteopathic Hospital, Los Angeles, California.

[1]Thomas Kirk Cureton, Jr., et al., *Physical Fitness of Champion Athletes*, Urbana: University of Illinois Press, 1951.

[2]Edward L. Bortz, Stress and Aging, *Geriatrics*, 10:93-99, March, 1956.

TABLE 3

ELECTROCARDIOGRAMS

Measurement	1948 Tracing	1957 Tracing
Lead I		
Amplitude of P wave	.4 mm.	.7 mm.
Amplitude of R wave	13.8 mm.	7.0 mm.
Amplitude of S wave	—.8 mm.	—1.1 mm.
Amplitude of T wave	6.4 mm.	3.7 mm.
P-R interval	.18 sec.	.18 sec.
QRS interval	.07 sec.	.06 sec.
Lead II		
Amplitude of P wave	1.3 mm.	.2 mm.
Amplitude of R wave	9.5 mm.	12.7 mm.
Amplitude of S wave	—.5 mm.	—.5 mm.
Amplitude of T wave	5.8 mm.	3.7 mm.
P-R interval	.20 sec.	.18 sec.
QRS interval	.07 sec.	.07 sec.
Lead III		
Amplitude of P wave	1.5 mm.	—.8 mm.
Amplitude of R wave	5.1 mm.	5.0 mm.
Amplitude of S wave	—1.3 mm.	.0 mm.
Amplitude of T wave	—1.6 mm.	.5 mm.
P-R interval	.20 sec.	.20 sec.
QRS interval	.08 sec.	.06 sec.

ELECTROCARDIOGRAM — 1957

	Lead V_1	Lead V_2	Lead V_3
Amplitude of P wave	—.5 mm.	.7 mm.	.6 mm.
Amplitude of R wave	1.0 mm.	10.7 mm.	25.5 mm.
Amplitude of S wave	—11.0 mm.	—15.0 mm.	—5.5 mm.
Amplitude of T wave	1.1 mm.	6.9 mm.	10.7 mm.
P-R interval	.19 sec.	.19 sec.	.19 sec.
QRS interval	.10 sec.	.08 sec.	.08 sec.
	Lead V_4	**Lead V_5**	**Lead V_6**
Amplitude of P wave	.3 mm.	.3 mm.	.2 mm.
Amplitude of R wave	28.0 mm.	20.2 mm.	13.1 mm.
Amplitude of S wave	—3.3 mm.	0.0 mm.	0.0 mm.
Amplitude of T wave	10.0 mm.	6.9 mm.	4.0 mm.
P-R interval	.19 sec.	.20 sec.	.20 sec.
QRS interval	.07 sec.	.06 sec.	.07 sec.

The electrocardiogram recorded in 1957 revealed no unusual changes. The electrical axis of +24 degrees was normal, and the amplitudes of the P, R and T waves were well within normal range, according to the standards of Burch and Winson;[4] likewise the duration of the P-R and QRS intervals. Although there was evidence of sinus arrhythmia, this is not an unusual finding in the electrocardiograms of athletes. Bradycardia and slight positive displacement of the S-T segment with upward concavity in V_5 and V_6 were also noted. These abnormalities may be associated with vagotonia and are frequently present in the electrocardiograms of athletes.[5] There was notching of the P waves in leads I, V_4, V_5 and V_6, inversion and notching of the P waves in AVR, and notched upright P waves in AVL. It is the opinion of some cardiologists that these changes are indicative of auricular hypertrophy; however, in the absence of other clinical evidence, they do not appear to be significant.

The P-R intervals of .18 second in lead I and .20 second in lead III are well within the limits of normal. Cureton and his associates reported that only one electrocardiogram in their series showed a P-R interval longer than .20 second, the exception being the tracing of Richards, with a P-R interval of .32 second.[6] However, in the reproduction of the original electro-

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[5]Arthur M. Master, Louis I. Dublin and Herbert H. Marks, The Normal Blood Pressure Range and Its Clinical Implications, *Journal of the American Medical Association*, 143:1464-1470, August 26, 1950.

[6]George E. Burch and Travis Winsor, *A Primer of Electrocardiography*, Third Edition, Philadelphia: Lea & Febiger, 1955, pp. 270-272.

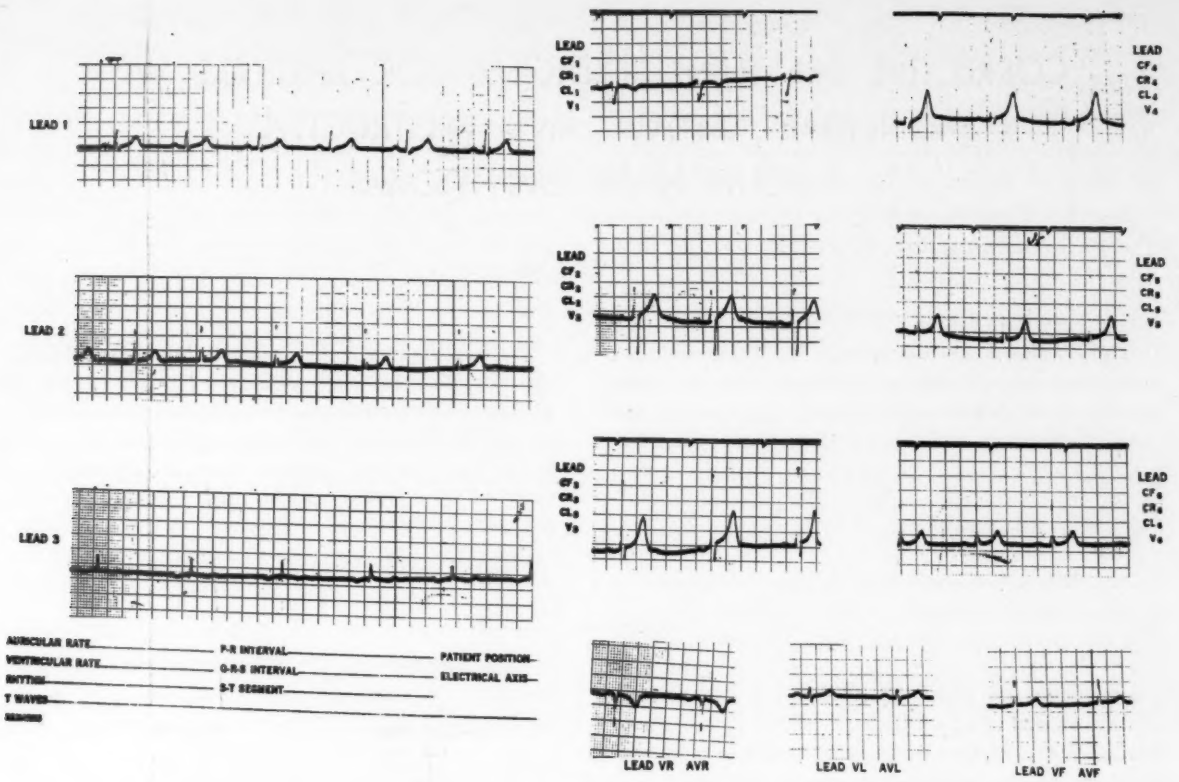

Fig. 1

Portions of the electrocardiogram of Robert Richards recorded in 1957.

cardiogram shown in their book[5] the P-R interval was only .18 to .20 second.[7] The discrepancy is attributed to a misprint.[8] Thus, the electrocardiogram of Landy with a P-R interval of .27 second, which was described in a previous report,[9] takes on renewed interest although the significance of the long P-R interval remains obscure.

Summary

Examination of a world champion pole vaulter who had undergone nine years of vigorous physical training and competition showed no electrocardiographic changes to indicate auricular or ventricular strain or hypertrophy, with the possible exception of minor alterations in the P waves. Anthropometric changes during that period were relatively minor.

Acknowledgement

The writers are indebted to Dr. H. Stanley Cowell for his assistance in the interpretation of the electrocardiograms.

[5]Demetrio Sodi-Pallares, Electrocardiography and Cardiology, Lecture series presented at the College of Osteopathic Physicians and Surgeons, February 27-March 9, 1956, Los Angeles, California.

[6]Thomas Kirk Cureton et. al. *Op. Cit.*, p. 163.

[7]*Ibid.*, p. 203.

[8]Thomas Kirk Cureton, Jr., Personal communication to Merlin L. Brubaker, December 3, 1957.

[9]Philip J. Rasch, David D. Geddes and Maxwell R. Brothers, The Electrocardiograms of Two Outstanding Runners, *Journal of the American Osteopathic Association*, 56:725-728, August, 1957.

CORRECTIVE BREATHING EXERCISES FOR PATIENTS WITH BRONCHIAL ASTHMA AND OBSTRUCTIVE PULMONARY EMPHYSEMA*

ROBERT J. WALSH, M.D., F.A.C.A.

The importance of corrective breathing exercises in management of patients suffering from bronchial asthma and obstructive pulmonary emphysema should not be underestimated. Standardization of technique with strict adherence to physiologic principle can lead to universal acceptance of breathing exercises in clinical therapeutic procedure.

In the above-named diseases, there is obstruction of the bronchial passageways that produces air trapping and overinflation of the lungs. In addition, lung tissues are damaged and exchange of oxygen and carbon dioxide at the physiologic level is diminshed. This paper is limted to application of corrective breathing exercises as they pertain to the ventilatory system where obstruction to airflow occurs.

There are many reasons why breathing exercises, with the patient lying flat, are efficacious. With the body erect, the descent of the diaphragm is aided by downward gravity pull from the weight of the abdominal organs. The same force opposes upward movement of the diaphragm during expiration. With the body in a supine position, it is different. In this position, the direction of force exerted by the abdominal organs is opposite in the respiratory cycle to the direction of force with the body in an erect position. That is to say, the force operates to keep the diaphragm elevated and lung volume reduced rather than increased. Furthermore, the inward weight of the chest wall in the supine position helps to reduce lung volume which in effect opposes air-trapping or overinflation.

Elevation of the diaphragm accompanying reduction of lung volume allows wider excursion of the diaphragm with resulting increased distribution and diffusion of air in the lungs. Lying flat, the patient is less likely to become fatigued or to develop excess accumulation of carbon dioxide in the lungs. Moreover, because some patients are confined to bed, it becomes a necessity, from the clinical standpoint, to understand the technique of conducting corrective breathing exercises with the patient lying flat.

To improve ventilation of the lungs by corrective breathing exercises, patients must be taught how to apply and regulate force during expiration.

Loss of elasticity of lung structure lessens the rate of exchange of oxygen and carbon dioxide as a result of excess accumulation and stagnation of air in the outer regions of the lung where blood flow is greatest. Breathing difficulty is further increased in elderly patients because, in old age, asthma and emphysema usually occur together. In the late stages of the latter disease, after the lungs are permanently expanded, obstruction to air flow may become minimal but respiration remains markedly impaired because ventilation is not sufficient to compensate for the increased lung volume.

At the beginning of the training program, the patient is taught how to fill and empty his lungs so that he can lessen the number of attacks of shortness of breath and shorten their duration. The necessity of emptying his lungs of at least as much air as he breathes in should be emphasized.

In determining the length of exercise periods, consideration should be given to the patient's age, size, and physical and mental conditioning. Ordinarily, the exercises last five minutes or more on morning awakening, evening retiring, during noon rest period, and at the onset of and during attacks of shortness of breath.

**From The Medical Service, Veterans Administration Hospital, Jackson, Mississippi, and the Department of Medicine, University of Mississippi School of Medicine, Jackson, Mississippi.

*Presented at the Seventh Annual Scientific and Clinical Conference, Southeastern Chapter, Association for Physical and Mental Rehabilitation, October 26-27, 1956, Veterans Administration Hospital, Jackson, Mississippi. Reprinted from *Annals of Allergy* 16:410-412. July-August, 1958 with kind permission of the Editor.

Interest and co-operation may be gained by telling the patient that the tissue lining of the air sacs or alveoli of the lungs has a surface area twenty-five times greater than the body skin area, and that in average resting respiration the alveolar tissues are in contact with approximately six thousand quarts of air and seven thousand quarts of blood in transit through the lungs daily. It will be further advantageous for the patient to know that elaborate physiologic studies of the interaction of the lungs and heart have been performed in the laboratory. These studies have shown that even during mild exercise, because of increased circulation of air and blood through the lungs, the oxygen uptake per unit of time may increase to twelve times that taken into the blood under resting conditions.

After the patient has been psychologically conditioned, his training may begin. A pillow is placed under his head and shoulders. This will raise the head and shoulders slightly above the base of the chest, allowing transmission of greater proportion of chest wall inward force toward the lung base where it can be most effective. A pillow is likewise placed under the knees to raise them slightly above the body trunk and to relax both abdomen and chest. In turn, better excursion of abdominal wall musculature and diaphragm follows. Breathing both in and out should be through the nose. The palms of the hands are held against the lower-most ribs with the elbows pointing outward and resting flat. Inspiration is brisk and short and largely dependent upon quickened contraction of the diaphragm. Expiration is prolonged to avoid raising the pressure of trapped air in the alveoli to an extent that will exert check-valve-like action upon the bronchi and further obstruct emptying of the lungs. This will require practiced control on the part of the patient. Near the very end of expiration the abdominal muscles are gradually tightened and increasing external pressure is applied by the hands, squeezing both sides of the base of the chest together.

If force is controlled and the exercise is done exactly in the above manner, it will not be necessary to instruct the patient to create back pressure in the lungs by pursing his lips, whistling, hissing, or grunting during expiration, in order to offset possible bronchial obstruction resulting from any check-valve-like action.

A separate exercise is given to enable the patient to gain control of and strengthen the diaphragm by having him breathe with a five-pound sand bag placed upon the abdomen. The action of the abdomen, in lifting the sand bag by each inspiration, imposes extra work on the diaphragm. Except for the latter exercise, the training program outlined may be done if need be, with the patient standing or sitting.

The techniques of the foregoing breathing exercises are particularly appealing because of their simplicity and efficiency in contributing to restoration of normal breathing mechanics. This in turn conditions patients for better exchange of oxygen and carbon dioxide in the lungs and for adjustment to increased physical activity and oxygen requirements.

Results of the correlated data showing clinical improvement of patients, permit one to conclude, especially in respect to rehabilitation, that a program of corrective breathing exercises is an important feature of management. If nothing more, through understanding, the patient's fear is lessened and he is able to feel he is no longer entirely dependent upon drugs for relief, but rather that he has been shown an entirely practical method with which to combat his lung disability throughout his lifetime.

Acknowledgement

Appreciation is expressed to John Hawk and Lester Burrowes, Department of Physical Medicine, Corrective Therapy Section, who conduct the breathing exercise program.

Bibliography

Barach, A.L.: *Physiologic Therapy in Respiratory Diseases.* J. B. Lippincott Co., Philadelphia, 1948, Ed. 2, p. 128.

Comroe, J. H., Jr., R. E. Forster, A. B. Dubois, and W. A. Brisco: *The Lung, Clinical Physiology and Pulmonary Function Tests.* Year Book Publishers, Inc., Chicago, 1955, pp. 62, 113-123.

Daymon, H.: Mechanics of Airflow in Health and Emphysema. *J. Clin. Invest.* 30:1175 (Nov.) 1955.

Gay, L. H.: *The Diagnosis and Treatment of Bronchial Asthma.* Williams and Wilkins Co., Baltimore, 1946.

Segal, M. S., and M. J. Dulfano: *Chronic Pulmonary Emphysema, Physiopathology and Treatment.* Grune and Stratton, Inc., New York, 1953, p. 11-15.

ANNUAL BUSINESS MEETINGS

The annual business meetings of the Board of Governors of the Association for Physical and Mental Rehabilitation were held from July 20-24, 1958 at the Ambassador Hotel, Atlantic City, N. J. The annual meeting of the General Assembly was held on July 22. The summary which appears below was condensed from the official minutes as recorded by the Secretary, Lester P. Burrowes. For the sake of simplification, chronology has been disregarded in an effort to condense material under single headings. Reports of committee chairmen are not included since they were made available to members through the June issue of the *APMR Newsletter.*

Board of Governors

Treasurer's Report

Mr. Heaslet distributed financial reports for the Fiscal Year 1958 to all members of the Board and presented a step by step explanation of each item on the report. It was moved and seconded that a financial report be forwarded to each chapter president who would, presumably, make it available to members for comment.

Vice President's Report

The report of the first vice president relative to membership was read. This included several recommendations regarding the keeping of records and membership lists. Mrs. Stone stated in her report that she was unable to continue serving on the Executive Board, and it was moved and seconded that a letter of commendation endorsed by the Board be sent to her in recognition for her many years of unselfish efforts and contributions to the Association as treasurer, vice president and membership chairman.

Executive Secretary

Discussion was begun concerning the feasibility of employing an executive secretary on a part-time basis. The following committee was appointed to study the problem: Messrs. Denny, Heaslet, Berner, Devins and Burrowes. After study, the committee offered the following resolution:

Be it resolved that we agree in principle to the establishment and support of a part-time Executive Secretary for the Association, but at this time it is not practical due to lack of necessary funds. However, it is suggested that the Past President's Council, with the assistance of the Secretary and Treasurer and chaired by the immediate Past President, be commissioned to work out a job description and determine the area of responsibility to be covered in this position. This group will then report back to the Board of Governors at the 1959 Convention; at that time the feasibility for establishment of this position can be reviewed and evaluated by the Board of Governors.

Constitutional Changes

The following changes in the Constitution and By-Laws were proposed by Arthur Landy, chairman, constitution committee, and approved by the Board of Governors:

***Constitution**: Art. III—Membership.* Changed to read: Membership in the Association shall be designated as Active, *Student,* Professional, Associate, Sustaining, Honorary, Life or Fellow.

***By-Laws**: Art. I, Sec. 1—Membership.* As above.

***By-Laws**: Art I, Sec. 2h—Membership.* Addition to read: To be a student member of the Association a person must:

1. Be a student in an accredited School of Physical Education acceptable to the Association for Physical and Mental Rehabilitation and posses such qualifications as are prescribed by the Board of Governors.

***By-Laws**: Art. I. Sec. 3a—Membership.* Changed to read: Applicants for Active and Student Membership shall make application in writing on the approved and designated application form through an Active Member of the Association to the Chairman of the Membership Committee for study and referral to the Chairman of the Professional Standards Committee for final approval or disapproval. (To become effective July 1, 1959)

***By-Laws**: Art. I. Sec. 5a—Membership.* Changed to read: Annual membership dues in the Association shall be: $15.00 for Active Membership; $5.00 for Professional Membership; $5.00 for Associate Membership; $3.00 for Student Membership. (Latter to take effect July 1, 1959.)

***By-Laws**: Art. I. Sec. 6d—Membership.* Changed to read: Professional, Associate and Student members whose mem- Professional, Associate and Student members whose membership is not renewed within sixty (60) days from date of expiration become delinquent and must make application as a new applicant to the Chairman of the Membership Committee.

***By-Laws**: Art. I. Sec. 7a—Membership.* Changed to read: All members of the Association shall be required to observe the Code of Ethics adopted by the Association.

***By-Laws**: Art. IX. Sec. 12—Standing Committees.* Addition to read: The Scholarship Committee shall: (a) Determine the qualifications and criteria for our scholarship program in the selection of accepted applicants; (b) Coordinate with Executive Board on plans and projects of the Scholarship Committee and with the Treasurer for actual disbursement of scholarship funds; (c) Receive and process applications for scholarships through the Scholarship Committee and publish results and notifications of scholarship awards; (d) Develop the public relations process concerning the availability of scholarships; (e) Continue to encourage scholarships fund-raising activities; (f) Schedule scholarship awards to be a part of the annual conference program. ***By-Laws**: Art. X. Sec. 3f—Chapters.* Changed to read: An initial fee of ten dollars ($10.00) will accompany application for Charter. A Chapter fee of five dollars ($5.00) will be due and payable annually between January 1st and March 1st.

The proposal for a Fellow Membership and the criteria for selection were referred to the Awards Committee for study.

Future Tri-Organizational Conferences

Considerable discussion centered about the question of future tri-organizational conferences.

After initial discussion, Mr. Root moved that the President appoint a committee to meet with representatives of AART and AMRDC to discuss future conferences. The motion was seconded and carried. Messrs. Denny, Weber, Ser, Phil Davis, Deyoe and John E. Davis were appointed to this committee which, together with representatives of the other two organizations, worked out the following agreement respective to future conferences:

TRI-ORGANIZATIONAL ANNUAL CONFERENCE AGREEMETT

A. ADMINISTRATION

1. The annual Tri-Organizational Clinical and Scientific Conference will be governed by a Convention Executive Committee (CEC). The CEC will consist of the Convention Chairman, selected on a rotating basis by the participating organizations, and one member from each organization. The Convention Chairman will be a non-voting member of the CEC. Decisions of the CEC will be made by majority vote and be final and binding on each organization.
2. The Convention Chairman will be responsible for the organization, administration and execution of the entire convention. He will be responsible directly and only to the CEC.
3. The CEC will advise, resolve, mediate and censor all facets of convention business in accordance with parliamentary procedure.
4. The CEC will appoint a Convention Treasurer who will be in charge of all convention funds and will disburse funds under the direction of the Convention Chairman as advised by the CEC.

B. CLINICAL AND SCIENTIFIC PROGRAM

1. The Convention Chairman will appoint the Program Chairman who will be responsible for the direction of the general meetings and the coordination of the section meetings.

2. There will be a maximum of four general sessions (a session constitutes one-half day).

3. Each participating organization will appoint a Section Program Chairman who will be responsible for the program of the section meetings and will coordinate them with the Convention Program Chairman.

4. The program for the General Sessions will be financed from the general convention fund. The program for the Sectional Meetings will be financed by the respective organizations.

C. CONVENTION SITE

1. In accordance with the agreement formulated by the participating organizations in 1957, the Convention Chairmanship will rotate between the participating organizations.
2. The convention site will be selected by that organization responsible for selecting the Convention Chairman.

D. FINANCIAL

1. There will be established an annual convention fund. This fund will be advanced monies by the participating organizations. Each organization will contribute to the fund one dollar ($1.00) for each active voting member of the organization based on a listing of the organization's active membership as of thirty days following the close of the convention each year. This listing of membership must be furnished to and be acceptable to the CEC.

2. All income from the convention such as registration, advertising, or exhibit fees, contributions, etc., will go into the annual convention fund.

3. All convention expenses will be paid from the annual convention fund except those incurred by the individual organizations for sectional meetings and other special individual organization affairs.

4. The original advance funds from each participating organization will be refunded prior to the distribution of any profits.

5. Any remaining profits will be shared in proportion to the amount of funds initially advanced.

6. Any losses will be assumed on the same percentage as above. Funds to cover losses will be paid into the convention treasury by the participating organizations within thirty days after the close of the convention.

7. It is recommended that active members of the participating organizations who are invited to appear on the general session programs would not be reimbursed from the annual convention fund.

E. REPORTS

1. The Convention Treasurer will make a preliminary report prior to the close of the convention.

2. After all convention expenses have been paid, the Convention Treasurer will submit a final financial report to the CEC who will serve as an auditing committee.

3. Any profits will be paid to the participating organizations within thirty days after the CEC has approved the final financial report.

4. The CEC will give a final convention report to the presidents of the participating organizations thirty days after the close of the Annual Convention.

F. CONVENTION FILES

The policies, procedures and agreements outlined herein will be reviewed annually by a representative committee of the participating organizations and amended as needed, based on the recommendations and experiences of the Convention Chairman and the CEC.

Conference Sites

In conjunction with AART and AMRDC, the following sites were selected for future conventions: 1959—Miami Beach, Fla. (Hotel Deauville, July 4-10); 1960—Santa Monica, Calif.; 1961 (tentative)—Indianapolis, Ind.

President-Elect

The President called for nominations for the office of President-Elect. Mr. Sader nominated Norman N. Tenner. Dr. C. H. Young, Kenneth Dening and Raymond Heaslet were nominated but all declined. Mr. Root moved that nominations be closed; Dr. Young moved that a unanimous ballot be cast in favor of Mr. Tenner, and this was seconded and carried.

Miscellaneous Business

1. Dr. Young made the following motion relative to the Research Committee: "It is moved that the Research Committee resolve plans for the structuring of a design whereby research grants may be established, possibly utilizing NRA funds, etc.; the requisites essential in making such grants to individuals or groups and format for requesting funds." The motion was seconded and carried.

2. The report of Mr. O'Banion concerning proposed APMR exhibit was read, and a sketch of the proposed exhibit was circulated. The Board approved plans and sketch of the exhibit as well as the cost ($950.00).

3. Mr. Fleming reported on the AAHPER meeting in Kansas City, March 31 in which APMR participated. Dr. John E. Davis was the principal speaker at the APMR meeting.

4. It was moved and seconded that Dr. Young's booklet, "Directional Goals for Clinical Therapy Experiences" to be sold by the Association at $1.00 per copy be made available through the chapter presidents, Editor of the *Journal*, and the Education Committee.

5. A general and informative discussion of the Inter-Disciplinary Study Group, of which APMR is a participating member, was presented by Louis F. Mantovano. This Group was begun by the American Occupational Therapy Association which invited several organizations interested in the rehabilitation and treatment of psychiatric patients through activity to participate. Primary objectives of the Group are to improve treatment through identifying each discipline and to improve relationships between the various organizations concerned.

6. Mr. Heaslet discussed the award presentations and made a motion that a return be made to the previous system of presenting awards at the annual banquet. This motion was seconded and carried.

7. Dr. Young moved that the committee organized to study the executive secretary's position also be empowered to carry out any business relative to grants. This motion was seconded and carried.

8. Mr. William G. Redden presented a check for $50 to the scholarship fund on behalf of the Southeastern Chapter and a check for $27.50 to the general fund.

GENERAL ASSEMBLY

The General Assembly met at 5:30 P.M. on July 22. The President called for the report of the Nominating Committee which was read by Chris Kopf. The committee presented the following slate to the Assembly: For First Vice President, Karl K. Klein and Kenneth Dening; For Second Vice President, Sam Burchart and George Heos; For Third Vice President, David Ser and Charles Castle; For Secretary, Lester P. Burrowes and Julian Vogel; For Treasurer, Raymond Heaslet (Norman Tenner ineligible). The following nominees asked to withdraw their names: Karl K. Klein, George Heos, Charles Castle and Julian Vogel. Nominations were then made from the floor. Dr. Carl Haven Young was nominated and elected to the office of First Vice President. Roland Gagnon and Kenneth Dening were nominated for the office of Second Vice President, and the latter was elected. Daniel Bennett, Roland Gagnon and John Murphy were nominated for the office of Third Vice President, and Mr. Bennett was elected. Lester P. Burrowes and Raymond B. Heaslet were re-elected Secretary and Treasurer, respectively, by acclamation.

VETERANS' ADJUSTMENT TO CIVILIAN LIFE CITED

Sumner G. Whittier, Administrator of Veterans Affairs, has recently reviewed the achievements of America's 22,700,000 living veterans. He found an outstanding record of adjustment to civilian life, made possible to a great degree by veterans' benefits such as GI training and GI loans. He found disabled veterans, through VA programs of hospitalization and rehabilitation, making their own way in the world on the same terms as the able-bodied, with no favors asked. He found veterans leaving their mark in almost every walk of life—the professions, the skilled trades, business, industry, farming, government.

Here are the highlights of the record, as recounted by Mr. Whittier: More than 10,000,000 veterans have prepared for new careers with the help of the educational benefits of the World War II and Korean GI Bills.

Among them are 500,000 engineers, 250,000 school teachers, 170,000 doctors, dentists and nurses and 115,000 scientists. Mr. Whittier noted that manpower shortages in these fields alone would be much more severe than they are today, had it not been for the trained veterans who entered the ranks.

GI trained veterans have helped raise the entire educational level of the United States, Mr. Whittier said. He cited a Census Bureau report that the average head of the household today has 10.4 years of schooling compared with only 9 years in 1950. The Census Bureau attributed the rise largely to the educational benefits of the two GI Bills.

Two other VA programs have assisted veterans in meeting the challenge of readjustment to civil life—GI loans and GI insurance.

Under the GI loan program, more than 5,000,000 veterans have been able to establish roots in their communities by purchasing homes of their own with VA-guaranteed loans. They have set a remarkable record of meeting their GI mortgage obligations, Mr. Whittier said; VA has had to pay claims on only eight-tenths of one percent of all home loans guaranteed.

Low-cost GI life insurance has given more than 6,400,000 veterans the sense of security that comes in preparing for the care of their families should anything happen to them. This peace of mind is a necessary first step in readjustment, Mr. Whittier pointed out.

America's disabled veterans have fought their way back to productive, independent lives with notable success, Mr. Whittier said. Many have been helped along the way by VA benefits such as hospital and medical care, vocational rehabilitation training, compensation and pension payments and grants for automobiles and specially-designed "wheelchair homes."

Some 650,000 disabled veterans received vocational rehabilitaion training. According to a VA study, 95 percent of the rehabilitated veterans are employed; nearly all are using skills acquired during training, and 99 percent like the kind of work they are doing.

Among the veterans is one, paralyzed from the waist down, who designs computers for guided missiles; another, without hands, who is a practicing architect; a blinded veteran who holds a top position in the U. S. Department of State, and a veteran, with both arms and both legs amputated, who is a successful attorney.

ATTITUDES–Cont'd from P. 185

Erickson and Kubie,[6] working with severe depressive cases, advocate active firmness. Toward one patient, for instance, they intentionally copied the punitive attitude for her overly rigid, moralistic mother. It was only after the therapist was actively identified with the victorian morality of the mother that it was possible to persuade the patient that such views were no longer adaptive in the modern world of interpersonal relationships.

What are the conclusions we may draw from these seemingly contradictory viewpoints concerning the pathology, therapy, and attitudes toward mentally disturbed people? I believe there is an underlying principle and directive which can be of great value to each of us. If we review for a minute, we find that friendly interest, but non-involvement, characterizes the treatment of people troubled with recent upsetting environmental situations. With the psychoneurotic, a directing, semi-firm attitude is advocated by Horney; while, with the stabilized psychotic, the setting up of pleasurable interpersonal conditions seems indicated. For the acutely disturbed schizophrenic, a directive, almost punitive, attitude seems to be relevant. Last we saw that the depressive syndromes often may need an initial rigid, strict, moralizing attitude, later to be changed to a more reasonable, reality oriented one. What this means for us and the principal idea I would like to leave with you is that the attitude necessary for the therapist is to be *flexible in his own attitude*. Adapt yourself in terms of the needs of the patient and expect that these needs will be quite different, depending upon such things as the age, diagnosis, level of regression, and personal history of the individual.

I would like personally to see on every referral sheet a section, such as that used at the Menninger Clinic, where the attitude of the therapist—an attitudinal prescription—is as clearly delineated as is the type of activity in which the patient is to engage. While this is not always possible, certain sources are available to each of you: First and foremost, the ward physician or ward psychologist, (2) staff conferences or treatment review boards and (3) psychological test data which may give some evidence of the needs of the patient.

To be able to discern the needs of our patients and then adapt our attitudes to meet these needs in a consistent manner is not an easy task; but as therapists, this is as necessary as mastery of modalities, if we are to achieve therapeutic success.

[6]H. M. Erickson and L. S. Kubie, The Successful Treatment of a Case of Acute Hysterical Depression by a Return Under Hypnosis to a Critical Phase of Childhood, *Psychoanal. Quart.*, 10:583-609, 1941.

"From Other Journals"

Edward J. Van Liere, "The Effect of Exercise on the Body." *West Virginia Medical Journal*, 54:153-156, May, 1958.

There is no scientific proof that physical exercise is beneficial, and there is a divergence of opinion among physicians as to its value. It is generally accepted that exercise increases the general muscle tone throughout the body and aids in the circulation of the blood. Whether it has a beneficial effect on the normal lung has not been demonstrated. Moderate exercise has little effect on either motility or secretion of the stomach; violent exercise may depress these functions. Exercises should not be counted upon to bring about a marked weight reduction. They may make a person "feel better," but this is presumably a subjective rather than an objective matter. Physical exertion cannot permanently injure a normal child, but it may harm persons past 40 years of age. Repeated exercise will cause muscles to hypertrophy, produce complex changes in the circulatory-respiratory system, and aid an individual to acclimatize to altitude.

Victor Cummings and Julian Rosenthal, "Activation of the Patient with Skeletal Metastic Neoplasia." *Journal of the American Medical Association*, 168:501-503, October 4, 1958.

In an aging population the incidence of degenerative and neoplastic disease must rise. The major problems in dealing with such patients are pain, fracture, neurological disability, and general inactivity. The broad aim of treatment is preservation of function to enable the patient to retain his independence. Every procedure and every prescription must be directed toward mobilization. Complete bed rest is to be avoided. A tilt table may be helpful. Supportive braces, molded jackets, plaster casts, and splints may be needed. This is rehabilitation, even if economic usefulness is excluded and the results are limited in duration. It is the responsibility of the physician to follow the patient through the training program and not relegate the supervision to a nurse or therapist.

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Mortimer Spiegelman, "Mortality Trends and Prospects and Their Implications." *Annals of the American Academy of Political and Social Science*, 316:25-33, March, 1958.

The people of the United State and of Canada have an extraordinary record of low mortality and high longevity. There is a notable excess of male over female mortality at every age. The death rates of the non-white population are still considerably higher than those of the white. Although some occupations involve specific health hazards, environmental influences are a more important factor. The mortality reductions have been accomplished largely through the control of infectious diseases. The major current problems are cardiovascular-renal diseases, cancer, and accidents. In 1955 these three categories accounted for more than three-fourths of all deaths in the United States. These have been brought to the fore partly by the rapid growth of the aged population and partly by improvements in diagnostic techniques. Health progress is intimately related to economic progress. Cancer and cardiovascular-renal conditions are largely of obscure and complex origins. Further reductions in mortality from these causes will flow from new advances in diagnostic procedures, medical therapy, and surgery. It seems likely that many of these disease factors are triggered into action by environmental influences.

Advances in therapy have prolonged the lives of persons with impairments, but this may result in a growing proportion of impaired lives at the older ages. The scope of the medical care problem is affected accordingly. There is an increased chance that a wife will outlive her husband, with a lengthened period of expected widowhood. There is a growing excess of females over males in the total population, particularly at the higher ages. The ratio of the population past 65 to those at the main productive ages (20-64 years) will rise. The effects of these changes on life in the United States and Canada require study.

Marion B. Sulzberger and Aaron B. Lerner, "Suntanning—Potentiation with Oral Medication.". *Journal of the American Medical Association*, 167:2077-2079, August 23, 1958.

The ancient Egyptians observed that derivatives of the plant *Ammi majus Linn* when combined with exposure to sunlight brought about re-pigmentation in certain patches of vitiligo. Relatively recently a physician's wife being treated for vitiligo with methoxsalen, a derivative of this plant, observed that the tanning response of her normal-appearing skin was substantially enhanced. Most investigators agree that ingestion of 10 to 20 mg. of methoxsalen followed by exposure to sunlight within 2-4 hours will produce some increase in normal hyperpigmentation. If the dosage is increased or if exposure to sunlight is too prolonged, erythema, edema, blistering, and pain result. The drug produces a thickening and increased density of the stratum corneum of the skin, which retains melania. The possible side effects of prolonged or repeated ingestion of methoxsalen are not yet known.

"A Schema for Tuberculosis Revisited," by William B. Tucker. *American Review of Tuberculosis and Pulmonary Diseases*, 78:333-345, September, 1958.

Treatment of tuberculosis includes drug therapy, steroid therapy, and resectional surgery of the lungs. Physical rest is the oldest form of treatment and has some beneficial influence on nearly all forms of tuberculosis. But by prescribing bed rest we deliberately *un*-condition the patient, requiring a long *re*-conditioning process at a later date. If it is permissible to treat patients with active tuberculosis with much less restriction of physical activity, less reconditioning is indicated. The corollary to less rest is less rehabilitation. It is incumbent upon us to keep an open mind on this point.

T. J. Powell and F. A. Sunahara, "A Physiologic Evaluation of the Flack Test." *Journal of Aviation Medicine*, 29:444-453, June, 1958.

In the Flack test the subject blows up a column of mercury to 40 mm. for as long as he can. The test does not seem of any value as a test of cardiovascular efficiency but may be of value in detecting a deterioration in emotional or physical efficiency. An investigation concerning the reason for voluntary cessation of the test showed that hemodynamics and changes in pO_2 and pCO_2 were not alone responsible. Fatigue, especially of the muscles of the thorax, may be responsible.

Bertram E. Sprofkin, "Peroneal Paralysis—A Hazard of Weight Reduction." *AMA Archives of Internal Medicine*, 102:82-87, July, 1958.

Crossing the legs, crouching, squatting, or kneeling may result in compression of the peroneal nerve against the femur or fibula or in stretching of the nerve. This is especially true in the case of tall, slender, long legged persons. The superficial peroneal nerve innervates the peroneus longus and brevis, which evert the foot. The deep peroneal branch innervates the dorsiflexors of the foot and the extensors of the toes. If its function is interrupted, a foot drop will result. When the common peroneal nerve is injured, the affected foot cannot be dorsiflexed at the ankle, the toes cannot be extended, and there is inversion of the foot. Reduction of fat may deprive the peroneal nerve of an element of protection.

Trevor H. Howell, "Analysis of Falls in Old People." *Journal of the American Geriatrics Society*, VI:522-525, July, 1958.

It is a matter of common knowledge that old people are liable to fall. Falling indicates a failure of the proprioceptive system and its connections which normally maintain erect posture. Clinical lesions giving rise to falls include (1) general muscle weakness, (2) local muscle weakness in the quadriceps femoris, (3) lesions of the pyramidal tract, (4) lesions of the posterior columns of the spinal cord, (5) Parkinson's disease, (6) syncope from various causes, and (7) an impending deterioration in the condition of the patient.

Franz Alexander, "The Next Ten Years in Psychiatry." *American Journal of Psychotherapy*, XII:438-442, July, 1958.

During the next 10 years we may visualize a gradual development in psychiatry in at least four directions: (1) Growing interest in the psychologic approach, leading to a more precise description and understanding of the psychotherapeutic process. (2) Increased emphasis on experimental study of emotional stress situations. (3) Regulation of the intensity of excitation in the different parts of the CNS by pharmacologic means. (4) Increased emphasis on the sociologic approach.

BOOSTER FUND

The following members have contributed to the 1958 Booster Fund since the publication of the last list:

Raymond L. Boda	Louis E. Guignard
Joseph T. D'Orazio	Warren N. Landon
Patrick Fiore	Louis F. Mantovano

JOINT COMMISSION PUBLISHES FIRST STUDIES

Current Concepts Study

What does mental health mean to you?

This is the central question framed in the first of a series of ten studies to be completed by the Joint Commission on Mental Illness and Health as part of a three-year study of the nation's mental health financed by grants from the National Institute of Mental Health and private groups. Dr. Jack R. Ewalt, study director, who is also professor of psychiatry at Harvard Medical School and Massachusetts mental health commissioner, recently announced publication of the study. The Joint Commission, comprising 37 voluntary and government agencies interested in mental health, will make a series of eleven reports to Congress and State Governors during the coming year, as provided by the Mental Health Study Act of 1955.

These include studies of Current Concepts of Mental Health (the first), costs of mental illness (to be released November 6), manpower, a nationwide survey of what people say troubles them and what they do about their troubles, mental health role of schools, mental health role of religion, community resources, research resources, communicability of mental illness and psychiatric treatment of the mentally ill, plus a final report of findings and recommendations for a national program. All studies will be published by Basic Books, Inc., under Joint Commission sponsorship.

About the Author

Dr. Marie Jahoda of London, England, until recently professor of social psychology and director of the Research Center for Human Relations at New York University, is author of the first study, concerned with the meaning of good mental health. In analyzing the philosophic and scientific views of experts on the nature of mental health, Dr. Jahoda found a variety of definite viewpoints as to what mental health is. In fact, she is led to the conclusion that, in the present state of knowledge, all of us are entitled to our own definition. As evidence of this fact, the published report contains a dissenting opinion from Dr. Walter E. Barton, Boston psychiatrist and Joint Commission member.

Dr. Jahoda was selected to do such a study, Dr. Ewalt explained, because his staff and advisers repeatedly ran into the question: "What do you mean by 'mental health?'"

."The need for a clearer understanding of what we mean by 'mental health' is obvious to anyone who has attempted to cope with the role of schools and the numerous community agencies involved in mental health promotion, prevention of mental illness and other phases of the mental health movement now in progress in the United States," said Dr. Ewalt.

"We commonly use 'mental health' as a term interchangeable with 'mental illness', in the same euphemistic way that 'public health' generally refers to the prevention or control of disease by mass methods. The behavioral scientists who have joined the mental health team and are making an increasingly important contribution have expressed dissatisfaction with a primary focus on 'sick behavior'. They argue that a new and broader perspective is needed."

Dr. Jahoda rejects either "absence of mental disease" or "normality" as satisfactory ways of defining mental health in the positive sense.

Whereas psychiatrists generally agree on what major mental illness is, she says that there is "no unanimity of opinion" regarding milder disturbances, or in the case of certain character disorders and the anti-social and criminal personalities. Often the best working definition of mental illness proves to be: "A case is a person under the care of a psychiatrist."

Normality, she says, tends to become synonymous with the average, or what "the majority of people feel, think and do." "However, the majority does many things that one would hesitate to call healthy," Dr. Jahoda points out. Standards of normal behavior in actual fact vary with the time, place, culture and expectations of the social group.

Likewise, she holds, well-being, happiness, contentment and satisfaction have serious limitations as standards of mental health:

"In a global sense, people are considered happy if what they want from life is in harmony with what life offers. Due to events not of his own making, the individual may not be able to control what life offers. To say that he must feel well, happy, content or satisfied under all conditions of misfortune or deprivation assumes a naive belief in the moral justice of whatever happens to him. An individual's happiness about whatever happens to him can hardly be judged to be a good measure of his mental health. In many situations, it is healthier to be unhappy."

Is there such a thing as good mental health then?

The scientists who have done research on the question obviously think so and, according to Dr. Jahoda, offer six different approaches to a definition of positive mental health:

1. Attitudes of the individual toward himself (self-perception). The emphasis is on "being oneself," and on seeing oneself as he is, not confusing ideal self and real self.

2. Achievement of one's potentiality for growth and development (self-actualization). Mental health is seen as the product of striving for self-realization—of becoming what one can be.

3. A pulling or tying together of all functions in the indivdual's personality (integration). The integrated personality, has an internal psychic balance and unifying philosophy that gives life purpose and meaning, and hence considerable tolerance for stress, anxiety or frustration and a capacity of resilience or ability to recover from setbacks.

4. Individual's degree of independence from social influences (autonomy). The autonomous individual accepts parts of his environment and rejects others; he is able to "be himself" and yet be part of "something greater than himself."

5. How the individual sees the world around him (perception of reality). Such perception is healthy when the individual sees what is really there, or what he sees is not distorted by some inner need, or he has a sense of how others feel.

6. Ability to take life as it comes and master it (environmental mastery). Here success becomes the goal and adaptation a means to success. Ability to love, work, play, solve problems and meet the requirements of any situation are necessary.

Each definition presents one complication or another in applying it to everybody, Dr. Jahoda indicates.

She warns that in speaking of a person's mental health it is advisable to distinguish between attributes and actions. The individual, she says, may be classified as more or less healthy in a long-term view of his behavior (his enduring attributes), or his actions may be regarded as more or less healthy in a short-term situation (appropriate under the circumstances).

Thus a person man be mentally healthy in one way and not in another. For instance, take the case of a man who is devoted to his work, tremendously successful and respected by his profession. By resolving all conflict between family life and work in favor of work he may not be a devoted, successful and respected husband and father. By one standard, he receives a clean bill of health; by another, he is lacking in health.

Dr. Jahoda observes that the one value in American culture compatible with most approaches to a definition of good mental health appears to be this: An individual should be able to stand on his own two feet without making undue demands or impositions on others. This might be regarded as a minimum definition, though Dr. Jahoda hastens to point out:

"In the present state of our knowledge perhaps it would be best to conclude that there are various types of mental health and that multiple standards can be applied to each. The genius and the moron and the average man may each have his own type of mental health."

In any event, the study emphasize that a national program against mental illness and for mental health does not depend on acceptance of a single definition and need not wait for it. A great deal more research is needed, Dr. Jahoda concludes.

Dr. Barton, expressing a typical medical viewpoint, dissents from rejection of the absence of illness as a criterion of mental health:

"Conceptually, it is difficult to see how a national program to reduce mental illness and increase mental health

can be operated on any other base line than a straight one. In this continuum, illness is the point of departure and health is the goal. We work away from one and toward the other.

"If we had solved, or even partially solved, the problems of preventing or treating major and minor mental illness, we could then justifiably concern ourselves with the issue of superlative mental health, or the degrees of goodness in good mental health. Unfortunately, we still have far to go in reducing illness. This is a practical concern, rather than a theoretical one."

Commented Dr. Ewalt:

"The object of our national mental health study is to disclose a course that will lead the American people to the improvement of their mental health. This could be done, logically, through more successful treatment of the mentally ill or through demonstrating opportunities for increased mental health among the many persons whose behavior is within the normal range and yet who do not achieve their fullest capacity for life satisfactory to themselves, their immediate associates or their communities. Or, it could be done through both approaches simultaneously, if both are feasible."

Economics of Mental Illness Study

The total direct and indirect costs of mental illness in the United States can be safely assumed to be in excess of three billion dollars a year, according to Dr. Jack R. Ewalt, director of the Joint Commission on Mental Illness and Health.

Dr. Ewalt bases this estimate on a study of the *Economics of Mental Illness* made by Dr. Rashi Fein, associate professor of economics of the University of North Carolina. The report was published recently by Basic Books, Inc., under the sponsorship of the Joint Commission, a group of 37 voluntary and government agencies making a three-year national mental health study.

The Fein report is the second of a series of ten studies to culminate next year in a final report of findings and recommendations for a national mental health program.

Dr. Fein approaches the problem from two standpoints, direct costs and indirect costs. Direct costs are the actual public and private expenditures for the care of the mentally ill, plus expenditures for mental health research. Indirect costs, the hidden expense of mental illness, are calculated in annual loss of production and income and in loss of future earnings.

He estimates the direct costs of mental illness at more than 1.7 billion dollars a year, but specifies that this is an understatement because certain known items of direct costs have not been reported. The largest category in this total is for care of patients in public mental hospitals, including Federal, state and county: nearly one billion dollars.

The 1.7 billion includes an estimate of 100 million dollars as the probable minimum cost of private psychiatric care, based on the gross income of psychiatrists in full-time private practice. It does not include the cost of care of patients with mental illness by general practitioners and specialists in internal medicine, believed to lie in the range of 241 million to one billion 205 million dollars. Reliable information on the amount of time these two categories of physicians devote to the mentally ill is not available. Likewise, there is no information on income from part-time practice of psychiatry.

Dr. Fein estimates that patients resident in State and county mental hospitals and psychopathic hospitals in one year lose 325,000 labor-force years with a dollar value of more than 728 million dollars. This is the indirect cost, with the greatest loss being centered in the age group 25 to 34.

Hence, the total direct and indirect costs per year are computed to be 2.4 billion dollars—1.7 plus .7 billion. This is a bare minimum estimate in view of the known items that cannot be calculated accurately.

"The total does not include private medical costs other than full-time private psychiatric costs," commented Dr. Ewalt.

"Judging from the discussion of low and high estimates of the cost of private medical care for the mentally ill, allowing for the fragmentary nature of the information in this and in other directions, and fully realizing that certain omitted categories of costs cannot be estimated, the total direct and indirect costs of mental illness in the United States may be safely assumed to be in excess of three billion dollars a year."

He further commented:

"We already knew that the data necessary to give all the answers about costs did not exist, but we believed an economist might be able to show us the routes to the information that would provide answers to such questions as how much does mental illness cost the people of the United States, how much would it cost to provide the highest possible standard of care for the mentally ill, can we afford these added costs, could greatly increased expenditures be justified from an economic as well as humanitarian viewpoint, and where is the money coming from?

"The essential value of Dr. Fein's study is to provide sound methods of computing the costs of mental illness. On this basis, his report should be of lasting value."

The following summarizes some of Fein's conclusions:

He warns against an economic approach that holds large direct costs as undesirable and something to be eliminated, pointing out that the primary purpose of nonprofit institutions is not to make a profit but to provide service and that, even in profit-making enterprises, costs need be minimized only to what is consistent with a given level of production.

In determining what should and can be spent for mental illness out of existing resources, he recommends that the following economic reasoning is appropriate:

The only meaningful concept is that total costs comprise both direct and indirect costs. The nation bears the cost of mental illnes whether it finances the direct costs or not. Economic considerations do not necessarily concern themselves with human or ethical values, but it is possible that increases in direct costs may reduce total costs. Measures reducing indirect costs are welcome, even though they may add to direct costs.

Dr. Fein refrains from attempting to tell legislatures where to find the money to meet the needs of mental illness as well as all other public needs, but suggests that an economy can afford to spend whatever it desires to spend. All that is necessary to spend more on one thing, he says, is to spend less on something else. What will be spent depends on the tax rate and the value system we embrace. The public and its leaders must make the choice.

SOUTHERN GROUP SPONSORING AID TO MENTAL RETARDATION FIELD

The Southern Regional Education Board has recently formed a Panel on Mental Retardation which will advise and assist the staff of the Board in determining ways and means whereby professional and technical training and research in the field of mental retardation can be increased and improved. The Panel membership is representative of educational and administrative responsibility and concern for the field as well as the major disciplines concerned with mental retardation.

Plans are under way for an intensive survey and analysis of present needs for trained personnel in the Southern region and present provisions for meeting these needs. Research in mental retardation is to be studied intensively as a part of a region-wide survey in mental health and behavioral science.

The mental health program of the Board includes sponsorship of research conferences and the administration of a grant from the NIMH for the purpose of allowing personnel of institutions for the mentally ill or retarded of the Southern region to visit other parts of the country to study new ways of performing their jobs. Personnel may stay up to four weeks at a cost of $500.00 under this program.

Book Reviews

"Panic and Morale," edited by Iago Galdston. (New York: International Universities Press, Inc., 1958. 340 pp. $5.00)

This book is based upon the proceedings of several conferences on the nature of panic and morale—the latest one in 1954—under the joint auspices of the New York Academy of Medicine and the Josiah Macy, Jr. Foundation. The participants represent the fields of medicine, psychoanalysis, cultural anthropology, social psychology, political science, radio broadcasting, etc.

G. M. Gilbert, clinical psychologist, discusses his experiences with panic in Germany, where he had occasion to examine many of the leaders and to observe mass behavior. Relating his findings to our own country, he cites the possibility of our panicking ourselves into a war, as well as that of reacting with panic in the adjustment to an unexpected period of peace.

For those whose concept of morale is limited to its military meaning acquired in the last century—"If something was wrong with the general attitude of military troops we spoke of bad morale. If mood and discipline were all right, we spoke of good morale."—this book should raise many questions concerning the broader implications of morale. Hans Zetterburg, research associate to the Conference, offers one definition of morale as "a disposition to act together toward a goal."

In his resume Galdston envisages morale as "an aspect of the carrying on of the business of living—and doing it effectively." He continues that good morale involves the cultivation of and the freedom to exercise one's competence in dealing effectively with life's inescapable obstacles. Since it is necessary for effective operation that the individual should be capable of orienting himself to the environment, and, since he achieves this by communication, it must follow that the less limited the communication the greater the competence of the individual to deal with the obstacles and the challenges of life. "Open communication promotes awarenes, recognition, and knowledge of invasive aggressiveness, our own as well as the other fellow's." Such awareness appreciably reduces the danger of panic. The hypothesis about morale promotion is strongly refuted by those who see morale maintained by protecting one's group from unpleasant news and limiting the spread of discontent through the control of communication.

Of particular interest to readers of this *Journal* are the discussions on therapist-patient morale and institutional morale.

CTS

"Applied Muscle Action and Co-Ordination," by Kathleen I. McMurrich. (Toronto: University of Toronto Press, 1957. 92 pp. $3.75)

This little book is designed to equip the occupational therapist with an elementary knowledge of kinesiology. In general it breifly and non-technically describes the most prominent muscles, their surface anatomy, pathology, and craft skills which may be used to aid in their rehabilitation. It is the author's contention that if a therapist has a good knowledge of muscle action she can develop her own techniques for the restoration of muscular strength and power. This is sound, but the greatly oversimplified description of muscle action is based on the premise that the therapist remembers the origins and insertions of the muscles and the course and distribution of their nerve supply from her earlier studies. This leads to a difficulty: if a therapist knows her kinesiology, she does not need a text of this kind; if she does not know it, she still does not need such a text—she needs a text on kinesiology. Where a text such as this will be used is not at all clear.

PJR

Margaret Hollis and Margaret H. S. Roper, "Suspension Therapy in Rehabilitation." (Baltimore: The Williams & Wilkins Company, 1958. 220 pp. $6.00)

Suspension therapy is one of the subjects included in the curriculum recommended by Muss and Mason for the training of corrective therapists (this *Journal* May-June, 1958) and it is probable that most corrective therapists have had some contact with it. It is apparently used much more extensively in Great Britain than in the United States.

This text is the first the reviewer has seen which is entirely devoted to the subject. Part I deals with the history and description of the apparatus and its application to movements of the various parts of the body. Part II is concerned with the use of the apparatus in the treatment of various pathological conditions—orthopaedic, rheumatic, paraplegic, amputation, geriatric, and nervous disorders. Each chapter in this part is written by a different author or group of authors. The text is profusely illustrated with photographs and drawings. An index is included. However, the material presented is all favorable to the technique; an objective consideration of its values and limitations would have greatly improved the book. Citations to the literature are almost completely lacking; for instance such a standard text as Dening, Deyoe and Ellison's Ambulation: Physical Rehabilitation for Crutch Walkers is not even listed in the section dealing with crutch walking.

Rising on the toes is presented as a second class lever, with no consideration of the fact that Kranz and other kinesiologists have stated that there are no second class levers in the body. Descriptions are given of methods of measuring muscle power, but it is clear that power cannot be ascertained by any of the means described. The use of the term elsewhere in the text suggests that the authors have confused it with strength. They might profitably review Cook's "The meaning of 'Strength' in Physical Medicine," abstracted in this *Journal* January-February, 1955.

The book is definitely useful as a handbook for those confronted with the practical problems of utilizing suspension therapy and should be in every hospital library. However, it does not qualify as a definitive text on the subject.

PJR

"Prodigal Shepherd," by Father Ralph Pfau and Al Hirshberg. (Philadelphia: J. B. Lippincott Company, 1958. 250 pp. $3.95)

This is a well-told story about the problems and cure of alcoholism. It develops an understanding of and an appreciation for the difficulties which beset the compulsive drinker. It is made quite clear, among other things, that an alcoholic is a neurotic personality. The leading character —not always a sympathetic one—is a Catholic priest, but Alcoholics Anonymous, and not the Church, is revealed as the key for handling the problem. Once the reader has begun this book he is not likely to put it aside. And having read it, he may give more than a passing thought to the next social occasion which calls for more than two Manhattans.

NWF

A Search for Man's Sanity—"The Selected Letters of Trigant Burrow." (New York: Oxford University Press, 1958. 615 pp. $8.75)

This series of letters reveals the "life story" of a great and respected psychologist. If there is less of the academic tone in his letters than in Burrow's professional writings, this is to be expected. In reading these letters one cannot escape the reserve, love, passion, pride, and humility of this man who finds time to write to taxi drivers and learned scholars alike. This book will leave the reader with an appreciation for a life which was dedicated to writing and research, but which found time for friends and family.

NWF

"Games of the Orient: Korea, China, Japan," by Stuart Colin. (Rutland: Charles E. Tuttle Company, 1958. 177 pp. $3.75)

In 1895 the University of Pennsylvania published Colin's "Korean Games, with Notes on the Corresponding Games of China and Japan." Since the original edition was limited to 550 copies, it quickly became a collector's item. His book has now been reprinted by Tuttle under a new title, one which the publishers feel is more descriptive of its contents. The text covers everything from dominoes to wrestling. It should be of particular interest to cultural anthropologists, but may give recreation therapists and grammar school teachers some new ideas for entertaining those in their charge. The book is profusely illustrated with drawings and is provided with a General Index and separate indices to Korean, Japanese, and Chinese names.

PJR

DANCE THERAPY GROUP SURVEYS THE FIELD

Although there does not seem to be a demand for many full-time dance therapists, there are many opportunities for persons with recreational therapy, occupational therapy and music therapy backgrounds to incorporate dance therapy into the activity program of the mental hospital. This was one of the conclusions of a survey conducted by the dance therapy study committee of the national section on dance, a division of the American Association for Health, Physical Education and Recreation.

According to the survey, most dance therapists have gained their therapeutic training through experience or observation and informal study with Marian Chace of St. Elizabeth's Hospital. Although all types of dance have been used by therapists, modern dance, according to the survey, has been found to be the most applicable to the therapy situation. Respondents referred to this modality by such terms as "unstructured movement experiences, free expression, basic movement, creative dance, dance movement in general, free dance, and interpretive," as well as by the term modern dance. A synthesis of the responses of respondents concluded that "dance is therapy when it is used as a carefuly guided tool to produce desirable physiological, emotional or behavioral changes in the participants. These changes are in the nature of alleviatior or correction of physical difficulties or deformities, release of tension, expression of feelings, resocialization, reality contact, increased self-awareness, awareness of others, self-acceptance and acceptance of others."

The committee concluded that a person interested in training for this field should have a broad background in all types of dance, particularly modern dance and dance education, and studies in anatomy, correctives, kinesiology, physiology, basic phychology, group work, social sciences, group dynamics, music, drama, and orientation courses in rehabilitation.

TRAINED PROFESSIONALS OFFERED OPPORTUNITIES TO PRACTICE SKILLS IN SERVICE TO THE BLIND

There is a growing need for professional workers in service to the blind. Expanded and improved programs require increased numbers of social workers, counselors, therapists, teachers, psychologists, vocational trainers, nurses, and other trained workers. Yet, some well-prepared professionals hesitate to enter the field owing to lack of knowledge of and experience with blind persons.

In an effort to encourage personnel already prepared in their own disciplines to enter service to blind persons, the Industrial Home for the Blind, in cooperation with the Office of Vocational Rehabilitation, is offering a 20 week training program designed to help trained persons to learn to apply their skills to service to the blind. Under this program, members of various professions are provided with field and didactic experiences, emphasizing the needs of blind persons and how these needs may be met by the various professions.

Each student spends full-time in the program and receives a traineeship grant. Among the experiences provided is supervised field work conducted under individualized leadership by a member of the student's own discipline. In addition, students take graduate level courses provided under the sponsorship of a recognized local college. These basic experiences are supplemented by field visits, lectures on eye conditions, instruction in communications methods and skills of daily living, and case conferences. The program is tuition-free.

All the facilities of the Industrial Home for the Blind are made available to students, including the Long Island Rehabilitation Center for Blind Persons, two special workshops, group and recreation program, low vision clinic, psychological laboratories, social work programs, nursery school, a specialized rehabilitation library, and a comprehensive community education program. Further details may be obtained by writing to Dr. Herbert Rusalem, Director of Professional Training, Industrial Home for the Blind, 57 Willoughby Street, Brooklyn 1, New York.

BROOKLYN MAN WINS ASSOCIATION SCHOLARSHIP

Sam Arnbender of Brooklyn, N.Y. has been selected as the recipient of the annual scholarship award of the Association for Physical and Mental Rehabilitation. The award provides a $500 scholarship. Mr. Arnbender plans to complete his studies in Health and Physical Education at Adelphi College, Garden City, Long Island after which time he expects to be eligible for certification in corrective therapy.

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Opler, M.K. 2:65, Mar. (Abs)

—P—

Paessler, H.W. & Berghaus, H. 5:170, Sept. (BR)
Palmer, H. 2:68, Mar. (BR)
Parish, H.H. & Alyea, F.P. 5:167, Sept. (Abs)
Passmore, R. 3:101, May (Abs)
Paterson, A. 4:140, July (BR)
Pattison, H.A. 1:26, Jan. (BR)
Paul, N.W. 2:64, Mar. (Abs)
Petersen, F.B. 5:167, Sept. (Abs)
Petersen, V.P. 5:168, Sept. (Abs)
Peterson, J.A. & Metheney, E. 1:25, Jan. (BR)
Pfau, R. & Hirshberg, A. 6:203, Dec. (BR)
Pickering, G. 3:101, May (Abs)
Podolsky, E. 4:141, July (BR)
Pomeroy, W.C. & White, P.D. 5:167, Sept. (Abs)
Porterfield, J., Daniels, L.W. & Smith, O.H. 1:13, Jan.
Powell, T.J. & Sunehara, F.A. 6:200, Dec. (Abs)

—R—

Rasch, P.J. 3:91, May; 4:125, July.
Rasch, P.J. & Brubaker, 6:191, Dec.
Rasch, P.J. & Morehouse, L.E. 3:102, May (BR)
Reichert, J.L. 4:139, July (Abs)
Rice, E.A., Hutchinson, J.L. & Lee, M. 5:170, Sept. (BR)
Richter, C.P. 2:65, Mar. (Abs)
Robertson, D.H. & Russell, E.W. 4:141, July (BR) (2)
Rodofsky, M. & Dening, K. 5:168, Sept. (Abs)
Root, L.M. 4:134, July.
Roper, M.H.S. & Hollis, M. 6:203, Dec. (BR)
Rosenberg, L. 4:131, July.
Rosenthal, J. & Cummings, V. 6:199, Dec. (Abs)
Ross, B. & Abramson, M. 2:66, Mar. (BR)
Ruhe, C.H.W. 1:22, Jan. (Abs)
Rusk, H.R., White, P.D., Williams, B. & Lee, P.R. 5:170, Sept. (BR)
Russ, J.D. & Soboloff, H.R. 5:170, Sept. (BR)
Russell, E.W. & Robertson, D.H. 4:141, July (BR) (2)
Ryan, A.J. 5:171, Sept. (BR)
Ryan, E.J., Morgan, J.L., & Tidwell, B.D. 4:138, July (Abs)

—S—

Sakade, F. 3:102, May (BR)
Salter, N. 2:50, Mar.
Sanua, V.D. 5:172, Sept. (BR)
Schubert, D.G. 3:104, May (BR)
Scott, H.A. & Westkaemper, R.B. 4:140. July (BR)
Sharp, H.E. & Takagaki, S. 2:67, Mar. (BR)
Sheldon, P.B. 1:27, Jan. (BR)
Singer, C. 2:66, Mar. (BR)
Sinowara, G.Y., Handy, M., & Deatherage, F.E. 2:65, Mar. (Abs)
Smith, O.H., Porterfield, J. & Daniels, L.W. 1:13, Jan.
Smith, J.W. 4:140, July (BR)
Smith, R.W. 5:171, Sept. (BR)
Soboloff, H.R. & Russ, J.D., 5:170, Sept. (BR)
Solomon, P. 4:138, July (Abs)
Spiegelman, M. 6:200, Dec. (Abs)
Sprofkin, B.E. 6:200, Dec. (Abs)
Stafford, G.T. & Kelly, E.D. 3:102, May (BR)
Steinhaus, A. 3:104, May (BR)
Stone, E. B. & Dayton, J.W. 3:103, May (BR)
Strohl, E.L. 3:101, May (Abs)
Sulzberger, M.B. & Lerner, A.B. 6:200, Dec. (Abs)
Sunahara, F.A. & Powell, T.J., 6:200, Dec. (Abs)
Szilagyi, N. & Taran, L.M. 5:168, Sept. (Abs)

—T—

Takagaki, S. & Sharp, H.E. 2:67, Mar. (BR)
Taran, L.M. & Szilagyi, N. 5:168, Sept. (Abs)
Thomas, B.M. & Miller, A.T. 5:168, Sept. (Abs)
Tidwell, B.D., Morgan, J.L. & Ryan, E.J. 4:138, July (Abs)
Tucker, W.B. 6:200, Dec. (Abs)

—V—

Van Liere, E.J. 6:199, Dec. (Abs)
Van Schoick, J.H. 6:181, Dec.
Vernier, L., Williams, J.F. & Brownell, C.L. 5:172, Sept. (BR)

—W—

Walsh, R.J. 6:194, Dec.
Weddell, G. 2:65, Mar. (Abs)
Westkaemper, R.B. & Scott, H.A. 4:140, July (BR)
White, P.D., Rusk, H.R., Williams, B. & Lee, P.R. 5:170, Sept. (BR)
Wickstrom, R.L., 5:162, Sept.
Wiley, B.C. 2:64, Mar. (Abs)
Williams, B., White, P.D., Rusk, H.R. & Lee, P.R. 5:170, Sept. (BR)
Williams, J.F., Brownell, C.L. & Vernier, L. 5:172, Sept. (BR)
Wittkower, E.D., Cormier, B.M., Marcotte, Y. & Forget, F. 1:21, Jan. (Abs)
Wolffe,, J.B. 2:67, Mar. (BR)

—Y—

Youmans, W.B. 4:140, July (BR)
Young, C.H. 5:149, Sept.

—Z—

Zausner, D.M. 2:64, Mar. (Abs)

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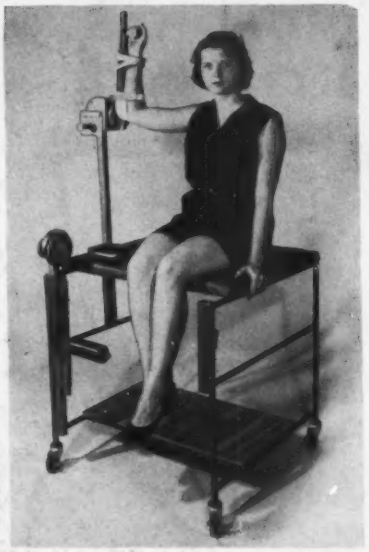

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